Alibaba and Intel Transforming Data-Centric Computing from Hyperscale Data Centers to the Edge

DATA-CENTRIC COMPUTING

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• New MaxCore™ Industrial PC Platform from Artesyn

Daniel Dierickx
CEO & co-Founder
at e2mos
Acting Chief Editor

*Over 3 decades
Chips & Embedded Systems
Global Market Expertise*

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NAGRA at AfricaCom 2018

November 13 - 15, 2018 - Stand D85
CTICC, Cape Town, South Africa

Innovative solutions for the converged pay-TV and OTT era

Meet with us at AfricaCom on Stand D85 to learn about our latest advanced and off-the-shelf solutions in content protection and OTT, as well as data analytics and media asset management designed to help pay-TV operators embrace cloudification and OTT, evolve in a data-driven world and create value for both themselves and their subscribers.. NAGRA product line highlights include:

Multiscreen OTT, a turnkey end-to-end OTT solution (Conax GO Live) for streaming live TV to Android and iOS devices with a guaranteed deployment time of less than 30 days;

Conditional Access Modules (CAMs) that enable the delivery of premium 4K Ultra HD content directly to iDTVs through broadcast or broadband IP networks without a set-top box, integrating NAGRA and Conax content protection product line solutions.
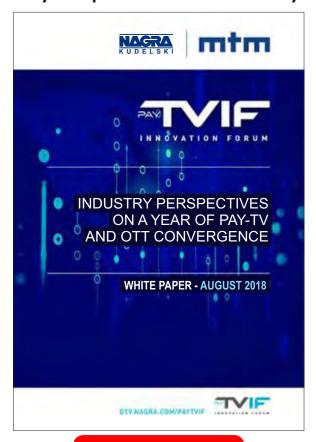
Broadcast audience measurement, an innovative system for one-way broadcast TV systems that collects audience data, predicts usage and helps reduce churn, leveraging the end-user's mobile device and NAGRA Insight, a next-generation data analytics and AI platform.

Media Asset Management, a cloud-based backend platform (NAGRA DVnor) to help manage the growing number of VOD and SVOD catalogues, including Hollywood content, and enable secure, efficient and smart content workflows.

Smart Home network and connected device security, a cloud-based solution (NAGRA HomeScout) to monitor devices and IP traffic over the home network and ensure ongoing safety, privacy and parental control.

More: https://dtv.nagra.com/

Industry Perspectives on a Year of Pay-TV and OTT Convergence - WHITE PAPER

Download the White Paper

In its third year, the Pay-TV Innovation Forum seeks to identify how innovation is driving opportunities for content owners and service providers around the world as they face a disrupted market. The findings are based on extensive regional research conducted in Europe, North America, with a special focus on the United States, Asia-Pacific and Latin America.

A sample of the key findings reveals that:
• 84 percent of pay-TV executives expect competition for paid-for video services to increase dramatically over the next five years
• As TV and OTT converge, the pay-TV industry is evolving towards a platform-agnostic model, transitioning into a paid-for video market
• Service providers are embarking on the next stage of digital transformation and innovation, encompassing accelerated improvements to the product and service portfolio, technology platform, commercial and operating models
• Top three innovation areas include continued investment in next-generation advanced TV services, more diverse multiscreen propositions and super-aggregation.

Intel Adds to Portfolio of FPGA Programmable Acceleration Cards to Speed Up Data Center Computing

25-Sep-2018

Intel introduced the Intel Programmable Acceleration Card (PAC) with Intel Stratix 10 SX FPGA in September 2018. The card leverages the Acceleration Stack for Intel Xeon CPU with FPGAs, providing data center developers a robust platform to deploy FPGA-based accelerated workloads. (Credit: Intel Corporation)
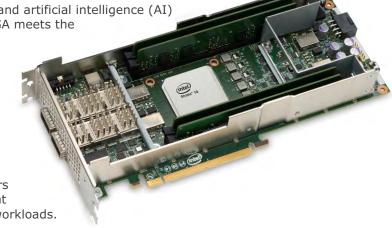
What's New: Intel today extended its field programmable gate array (FPGA) acceleration platform portfolio with the addition of the new Intel® Programmable Acceleration Card (PAC) with Intel® Stratix® 10 SX FPGA, Intel's most powerful FPGA. This high-bandwidth card leverages the Acceleration Stack for Intel® Xeon® CPU with FPGAs, providing data center developers a robust platform to deploy FPGA-based accelerated workloads. Hewlett Packard Enterprise* will be the first OEM to incorporate the Intel PAC with Stratix 10 SX FPGA along with the Intel Acceleration Stack for Intel Xeon Scalable processor with FPGAs into its server offering.

"We're seeing a growing market for FPGA-based accelerators, and with Intel's new FPGA solution, more developers – no matter their expertise – can adopt the tool and benefit from workload acceleration. We plan to use the Intel Stratix 10 PAC and acceleration stack in our offerings to enable customers to easily manage complex, emerging workloads." –Bill Mannel, vice president and general manager, HPC and AI Group, HPE

Why It's Important: As the demands for big data and artificial intelligence (AI) increase, the reprogrammable technology of the FPGA meets the processing requirements and changing workloads of data center applications. With reconfigurable logic, memory and digital signal processing blocks, FPGAs can be programmed to execute any type of function with high throughput and real-time performance, making them ideal for many critical enterprise and cloud applications.
The acceleration stack for Intel Xeon CPU with Intel FPGAs works with industry-leading OS, virtualization and orchestration software partners, providing a common interface for software developers to get faster time to revenue, simplified management and access to a growing ecosystem of acceleration workloads.

What the Solution Includes:
• Intel-validated Intel Programmable Acceleration Card (PAC) with Intel Stratix 10 SX FPGA.
• Production-grade FPGA Interface Manager (FIM) to which Intel and partner AFUs are connected.
Acceleration Stack for Intel Xeon CPU with FPGAs, including a common set of APIs and open-source drivers that work seamlessly with industry-leading OS, virtualization and orchestration software across the portfolio of Intel programmable acceleration cards.
• Support for native, network-attached workloads; initial partners including Adaptive Microware* and Megh Computing*, with more to come.
• Workloads available through acceleration workload storefront for ease of evaluation.

More Context: Programmable Solutions Group News

The Small Print: Intel technologies' features and benefits depend on system configuration and may require enabled hardware, software or service activation. Performance varies depending on system configuration. No computer system can be absolutely secure. Check with your system manufacturer or retailer or learn more at www.intel.com.

Full article with all direct links CLICK HERE

ADLINK Joins Open Networking Foundation (ONF) as Collaborating Innovator to Boost Transformation of Network Infrastructure

Membership will add ADLINK's expertise in developing both COTS and ODM solutions for networking & communications applications to operator-led consortium

San Jose | 2018/07/09

ADLINK, a leading provider of Edge Computing, today announced its membership as a Collaborating Innovator of the Open Networking Foundation (ONF) operator-led consortium. ADLINK and its broad range of strategic ecosystem partners continue to play an increasingly important role in influential industry consortiums such as ONF, Central Office Re-architected as a Datacenter (CORD) and Open Compute Project (OCP) by working together on advanced, open architecture business initiatives.

 As an open, collaborative, non-profit consortium driving transformation of network infrastructure and carrier business models, the ONF serves as the umbrella for a number of projects, building solutions by leveraging network disaggregation, white box economics, open source software and software-defined standards to revolutionize the carrier industry. Working closely with leading communication service providers and equipment vendors on various open source projects, the ONF leverages its released reference designs to facilitate the roll-out of next-generation networking solutions, significantly driving down both Capex and Opex for the whole ecosystem and opening up enormous business opportunities for new services.

"Telecom operators are driving solutions based on open hardware and software architectures, enabling infrastructure for quick time-to-revenue while lowering TCO for emerging Edge and 5G deployment. At this inflection point, the ONF is well positioned to catalyze a transformation of the networking industry with its newly established strategic plan," said Jeff Sharpe, ADLINK director of product strategy and business development for networking and communications. "We are very excited to join and contribute to ONF, as we will be able to leverage the ONF's community resources and reference designs to develop next-generation networking solutions. Our ultimate goal is to bring ADLINK's innovation and unique value proposition for network transformation to the carrier industry."

ADLINK began its focus on open architecture by becoming a major contributor to the OCP more than five years ago. At the ONF, ADLINK will leverage its Open Compute Carrier-grade Edge Reference Architecture (OCCERA), OCP and GPU-based solutions to develop next-generation networking and communications platforms, enabling use cases such as Multi-Access Edge Computing (MEC), universal Customer Premises Equipment (uCPE) and extremely low-latency Edge Compute platforms for 5G networks. ADLINK's solutions will effectively address the requirements for low-latency, high-bandwidth and compute-intensive applications driven by the needs of security, deep packet inspection (DPI), Edge Computing, virtual network functions (VNF), 5G evolution and revenue producing solutions for operators.

 As a leading ODM, ADLINK is an ideal contributor to the ONF-envisioned business model with its high quality design and manufacturing capabilities, producing cost- effective COTS/custom solutions with reduced time-to-market. ADLINK offers design services in every major geographic region, which benefits customers with increased responsiveness, short delivery lead-time and ease of doing business locally. ADLINK also ensures best practices in product lifecycle management by leveraging its long- standing strategic partnerships with major processor and software vendors.

Learn more about ONF.

Fujitsu closes computer plant in Germany

October 26, 2018 // By Christoph Hammerschmidt
Source eeNews Europe Click Here

It is the last manufacturing facility for PCs in Germany:
the computer factory of the Japanese Fujitsu Group in Augsburg (Bavaria). Now the company has announced that it will close production by 2020.
All 1500 jobs in the subsidiary will be affected.

The closure of the Augsburg plant is part of a comprehensive restructuring of the group which includes a technological reorientation with focus on Artificial Intelligence (AI), Blockchain and industry-specific solutions, the company explained in a press release. Development, production and logistics activities will be relocated to Japan.

At the plant, the company mainly produces PCs, notebooks and memory systems under the Fujitsu Primergy brand. In addition to PC production, the Augsburg plant is responsible for worldwide production of Fujitsu Primergy servers based on x86 processors.

Currently, up to 21,000 units (12,000 client computing devices, 950 server/storage systems, 50 racks and 8,000 system boards) are manufactured daily and around 2,500 new configurations and modifications are implemented every week. According to the Fujitsu website, the production site is regarded as "a prime example of flexibility".
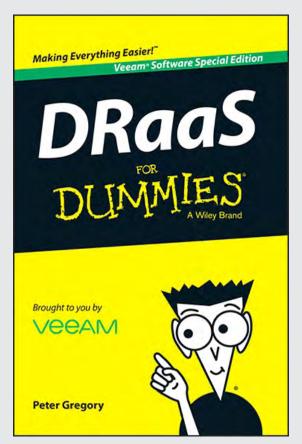
Besides the Augsburg production plant staff, about 300 jobs at other German locations are also to be cut. Fujitsu said it wants to cushion redundancies with a social plan.

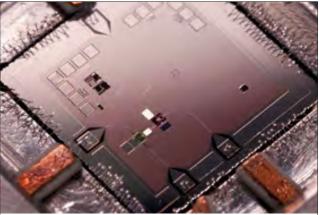# New strategy: let's not miss out on quantum science

Before quantum information science can be turned to national security purposes, it first has to be understood.

By: Kelsey Atherton, C4ISRNET – 26 Sep 2018

Uncertainty is the heart of quantum information sciences. Drawn from 20th century work in quantum mechanics, computer science and cryptography, quantum information science promises better and more secure computing, but the exact nature of the benefits will have to be sussed out through scientific research and then refined into technology.

In anticipation of some great benefit from this work, earlier this month the National Science and Technology Council released a grand strategy for how the United States. It is an inherently strange document, a draft of the future posture written in the sterile and analytical language of the strategy form, all hinged around a science whose future benefits remain unknown.

"Significant uncertainty remains regarding the overall economic and national security impact of QIS research and development," reads the fourth item in the strategy's section on challenges. "With strong industrial engagement now beginning, it is crucial to maintain a culture of discovery. The likely best-use commercial cases of quantum devices are unknown at this time and must be found through research."

This quantum machine holds a qubit, which is akin to the traditional binary-state bits of classical computing, except with the states held in quantum superposition. Understanding quantum information science and utilizing qubits is an important frontier in computer science.
(Erik Lucero, University of California Santa Barbara [CC BY SA 3.0])

While the specifics are unknown, the strategy sets out a few fields in which the government can expect to see some valuable returns from investment. These fields include new sensors for biotechnology and defense, as well as next-generation positioning, navigation, and timing systems for military and commercial applications.

But this is not a roadmap without a compass.

The strategy suggests one more concrete outcome from funding research into quantum information science could be "single-photon detectors" that "may become possible at far infrared and microwave wavelengths to expand the range of discovery of the dark universe, while non-classical emitters could be integrated for sensing, communication, and computing systems at room temperature."

The way to discover these mysteries of the universe, and then bend them to national security ends, are fairly straightforward. The path offered by the strategy is mostly funding and coordinating scientific research, rather than iterating existing technology, and then identifying Grand Challenges to guide future research.

Research gets nowhere without researchers, and the strategy notes that it is harder to develop pipelines for multidisciplinary fields, such as quantum information science, than it is for more clear-cut paths. The "how" outlined involved everything from civil society groups to companies sharing resources via the cloud to existing fellowship programs.

With the people and goals in mind, the strategy wants to set up infrastructure to make sure it all works. Again, the strategy sets a goal of finding what the needs are and building to them, which means the needs are either unknown or unknowable at this time, both weird factors to plan resource coordination around.

There are specifics to glean and future research to infer from the strategy, though taken altogether the document feels as much about not wanting to miss out on future technology as it is about actively guiding the development.

It's fair to note why quantum information science can both enable a secure mesh communication network and why it threatens existing cryptography, and in both cases to talk about how the United States plans to manage that risk and potential.

Still, whatever the future holds, there is money in charting out the course. It may not yet have the draw of machine learning, AI, or the blockchain, but it's not hard to imagine a future where "incorporating quantum information science" carries the same kind of buzz, and attracts the same kinds of federal dollars.

ABOUT THE AUTHOR
Kelsey Atherton is a technology writer based in Albuquerque, New Mexico. He primarily covers defense technology and unmanned vehicles, and will happily argue the semantics of what is and isn't a drone. When not writing for Popular Science he maintains the even-nerdier Grand Blog Tarkin http://blogtarkin.com/

VMware Recognized as a Leader in Gartner Magic Quadrant for WAN Edge Infrastructure

VMware Placed Furthest for Completeness of Vision within this inaugural Gartner Magic Quadrant comprised of 20 vendors

PALO ALTO, Calif., Oct. 23, 2018 (GLOBE NEWSWIRE) -- VMware, Inc. (NYSE: VMW), a leading innovator in enterprise software, today announced that it has been recognized, as a Leader in the inaugural Gartner Magic Quadrant for WAN Edge Infrastructure(1). The report, profiling 20 vendors, recognized VMware as a Leader in both ability to execute and completeness of vision, and VMware's position was placed furthest for completeness of vision. Download a complimentary copy of the 2018 Gartner Magic Quadrant here.

"VeloCloud, now part of VMware, began with the idea of transforming branch networking. With VMware NSX SD-WAN, customers are finally able to rethink their WAN, adopting a software-defined approach that supports better connectivity, lower costs, increased efficiency, and the ability to execute technology initiatives that the networks of yesterday were unable to sustain," said Sanjay Uppal, vice president and general manager, VeloCloud Business Unit, VMware. "We believe this recognition validates VMware's vision of the Virtual Cloud Network for delivering pervasive connectivity and intrinsic security to applications, data and users wherever they are located, and further solidifies VMawre as a leader in driving the evolution towards software-based networking."

... to next page

VMware Recognized as a Leader in Gartner Magic Quadrant for WAN Edge Infrastructure

Vmware NSX SD-WAN by VeloCloud enables simple, agile and more secure branch connectivity. NSX SD-WAN combines the economics and flexibility of a real-time network overlay with the deployment speed, scale and automation of cloud-delivered services. With NSX SD-WAN, organizations of all sizes and in any industry can support application growth, network agility, and simplified branch implementations, and optimize access to cloud data centers and SaaS applications. NSX SD-WAN is available as a service or as an on-premises software solution directly from VMware or from a network of service providers worldwide.

NSX SD-WAN is a powerful branch and edge connectivity platform that helps enterprises connect any location across a heterogeneous, complex network with zero-touch deployment. The NSX SD-WAN platform enables partners to use the extensible NSX SD-WAN Technology Partner SD-WAN API (orchestration, control & data) and SDK, along with the NSX SD-WAN VNF framework, to seamlessly integrate best-in-class services and solutions for security, advanced analytics and even AI capabilities. NSX SD-WAN supports direct integration with AWS, Check Point, Forcepoint, Fortinet, Google Cloud Platform, IBM Security, Microsoft Azure and Office365, Palo Alto Networks, Symantec, Zscaler, and more. Additionally, as massive amounts of compute power is deployed in factories and farms, homes and automobiles, oil rigs and cruise ships, these disparate islands of data at the edge must be connected. NSX SD-WAN delivers this connectivity in a simple and powerful way while enabling the branch and edge to operate in a more cloud and "as a service" way.

About the Virtual Cloud Network

The Virtual Cloud Network is VMware's vision for empowering customers to create a digital business fabric for connecting and protecting applications, data, and users across the entire network in a hyper-distributed world, With a Virtual Cloud Network, customers can create an end-to-end software-based network architecture that delivers services to applications and data at global scale from edge to edge, with consistent, pervasive connectivity and intrinsic security for apps and data independent of underlying physical infrastructure or location. NSX SD-WAN provides a common operating environment that extends the Virtual Cloud Network across branch, cloud and telco environments. With the VMware NSX portfolio, customers can deliver consistent networking and security across private data centers, AWS, Azure, and IBM Cloud, and with advanced support for traditional and modern application frameworks.

Customer and Partner Commentary

"At Hall and Prior, we're leading the way in delivering high-quality aged care across Australia," said Dan Beeston, IT Manager for Hall & Prior Aged Care. "Our ability to connect and protect our key applications and a range of users across our environment is critical to our success. Macquarie Telecom SD-WAN powered by VMware has delivered a network that's fast and reliable. This enables us to connect carers and residents seamlessly throughout the day and keep business operations running smoothly and uninterrupted, while better securing sensitive information."

"Businesses today rely on the cloud to power critical applications and communications tools, and an increasing number of organizations rely on public broadband to do so," said Sanjay Srinivasan, chief architect at Vonage. "In partnership with VeloCloud, now part of VMware, Vonage pioneered the application of SD-WAN as an important element of optimizing user experience and business value when adopting unified communications as a service (UCaaS). We're able to offer our Vonage SmartWAN service, powered by NSX SD-WAN by VeloCloud, integrated with our core service, allowing us to deliver MPLS like QoS, uptime and SLAs over public broadband, including LTE. This is a testament to the power of the NSX SD-WAN solution."

"Coevolve has deployed next-generation networks based on VeloCloud, now part of VMware, for our clients' sites across 55 countries worldwide," said Tim Sullivan, Chief Executive Officer, Coevolve. "The underlying foundation for these networks is cloud-delivered SD-WAN and a software-based Virtual Cloud Network architecture that provides agile networks for global applications. VMware is empowering our customers with a rich and proven portfolio of virtual cloud networking solutions, and we believe VMware is well positioned as a next-generation leader in networking."

About VMware

Vmware software powers the world's complex digital infrastructure. The company's compute, cloud, mobility, networking and security offerings provide a dynamic and efficient digital foundation to over 500,000 customers globally, aided by an ecosystem of 75,000 partners. Headquartered in Palo Alto, California, this year VMware celebrates twenty years of breakthrough innovation benefiting business and society.

For more information, please visit https://www.vmware.com/company.html.

(1) Source: Gartner, Inc., Magic Quadrant for WAN Edge Infrastructure, Joe Skorupa, Andrew Lerner, Christian Canales, Mike Toussaint, et al., October 18, 2018.

ADLINK Helps NSFOCUS Build Next-Generation 100G+ Grade IDS and IPS that Offer Safer, More Reliable and More Stable Solutions to Carriers

Designed to deliver high performance, high density and high scalability, ADLINK's CSA-7400 enables customer to build solutions meeting the demands of high-end application scenarios such as core networks for operations, cloud computing, large enterprises, and data centers

San Jose | 2018/08/08 -- ADLINK Technology, Inc., a global provider of advanced Edge Computing products, has announced availability of a next-generation 100G+ grade intrusion detection systems (IDS) and intrusion prevention systems (IPS) offering using ADLINK's high performance CSA-7400 network security appliance. Developed by NSFOCUS https://nsfocusglobal.com/, a leading provider of enterprise-level network security solutions and services with dual headquarters in Beijing and Santa Clara, the IDS/IPS offering is designed to provide a safer, more reliable and more stable solution than is currently available in the network security market. As proof of value, the NSFOCUS solution has been selected by a Chinese carrier for field trial and deployment. An application story jointly published by ADLINK and NSFOCUS is currently available to provide additional details on the solution.

Network security challenges have become increasingly serious with the evolution from Internet era to IoT era. Not only has the number of organized, premeditated attacks across all networks increased, but the form of cyberattacks has become more & more complex and advanced. In this new age of network security, the roles of the IDS & IPS are gaining increasing importance with their continuous development and innovations. In the meantime, emerging, sophisticated security solutions have significantly raised the bar how computing platforms are built.

"With our expertise in attack prevention developed over the years, this in-depth collaboration with ADLINK enables both parties to build IDS/IPS products meeting the demands of high-end application scenarios such as core networks for operations, cloud computing, large enterprises, and data centers. The interconnected, redundant module design and hot swap support for both computing nodes and switches of the CSA-7400 platform from ADLINK offer users uninterrupted delivery service," said Dr. Yang Chuan-An, NSFOCUS chief architect. "NSFOCUS' NIPS products are equipped with various advanced technologies, such as the NSFOCUS global threat intelligence system and NSFOCUS unknown threat detection, which can demonstrate better protection on the CSA-7400. In the future, NSFOCUS will continue close collaboration with ADLINK for its IDS/IPS products to maximize the effectiveness of the excellent features of NSFOCUS' NIDS/NIPS products on the CSA-7400 platform for the network security market."

By leveraging more than 20 years of expertise in developing highly reliable and available embedded computing systems, ADLINK is a premier supplier of COTS/ODM solutions to worldwide tier-one TEMs and network security integrators. Featuring high throughput capacity and I/O density, parallel computing and computing density, carrier-grade high availability, and support for standardized API management, ADLINK's CSA-7400 platform meets the stringent requirements for network security systems and enables NSFOCUS to develop its brand new, innovative NIDS and NIPS intrusion protection solutions to help its customers effectively monitor for, detect, and prevent any challenging attacks.

"The CSA-7400 is a next-generation, high performance, carrier grade COTS network security platform built on the Open Compute Carrier-grade Edge Reference Architecture (OCCERA) by ADLINK, integrating network interfaces, switches, and overall computing capacity. The open hardware architecture and platform scalability of the CSA-7400 support NSFOCUS' next-generation 100G+ ISD/IPS solutions, allowing NSFOCUS to launch its high-performance NIDS/NIPS products for the network security market," said Julian Ye, ADLINK director for networking and communications. "The CSA-7400's flexibility and configurability enables cross-business product deployment and easy integration to other high-end network security markets, such as next-generation firewalls, telecommunications, and multi-access edge computing. In addition to hardware features, the API library provided by ADLINK allows security solution providers to focus on their core competence, enhance business migration, increase product efficiency, and shorten product launch and delivery cycles."

ADLINK offers design services in every major geographic region, benefiting customers with increased responsiveness, short delivery lead-time and ease of doing business. In addition, ADLINK ensures best practices in product obsolescence and lifecycle management by leveraging its long-standing strategic partnerships with major processor and software vendors.
MORE about NSFOCUS' advanced solutions and ADLINK's CSA-7400 platform, please download the application story.

Alibaba and Intel Transforming Data-Centric Computing from Hyperscale Data Centers to the Edge

September 20, 2018 -- Source Intel News Room

What's New: At The Computing Conference 2018 hosted by Alibaba Group* in Hangzhou, China, Intel and Alibaba revealed how their deep collaboration is driving the creation of revolutionary technologies that power the era of data-centric computing – from hyperscale data centers to the edge, to accelerate the deployments of new applications such as autonomous vehicles and Internet of Things (IoT).

"Alibaba's highly innovative data-centric computing infrastructure supported by Intel technology enables real-time insight for customers from the cloud to the edge. Our close collaboration with Alibaba from silicon to software to market adoption enables customers to benefit from a broad set of workload-optimized solutions."
 – Navin Shenoy, Intel executive vice president and general manager of the Data Center Group

What the Headlines are: Intel and Alibaba Group are:
• Launching of a Joint Edge Computing Platform to accelerate edge computing development
• Establishing the Apsara Stack Industry Alliance targeting on-premises enterprise cloud environments
• Deploying latest Intel technology in Alibaba to prepare for the 11/11 shopping festival
• Bringing volumetric content to the Olympic Games Tokyo 2020 via OBS Cloud
• Accelerating the commercialization intelligent roads

"We are thrilled to have Intel as our long-term strategic partner, and are excited to expand our collaboration across a wide array of areas from edge computing to hybrid cloud, Internet of Things and smart mobility," said Simon Hu, senior vice president of Alibaba Group and president of Alibaba Cloud. "By combining Intel's leading technology services and Alibaba's experience in driving digital transformation in China and the rest of Asia, we are confident that our clients worldwide will benefit from the technology innovation that comes from this partnership."

How They Accelerate on the Edge: Intel and Alibaba Cloud launched a Joint Edge Computing Platform that allows enterprises to develop customizable device-to-cloud IoT solutions for different edge computing scenarios, including industrial manufacturing, smart building and smart community, among others. The Joint Edge Computing Platform is an open architecture that integrates Intel software, hardware and artificial intelligence (AI) technologies with Alibaba Cloud's latest IoT products. The platform utilizes computer vision and AI to convert data at the edge into business insights. The Joint Edge Computing Platform was recently deployed in Chongqing Refine-Yumei Die Casting Co., Ltd. (Yumei) factories and was able to increase defect detection speed five times from manual detection to automatic detection (1).

How They Drive Hybrid Cloud Solutions: Intel and Alibaba Cloud established the Apsara Stack Industry Alliance, which focuses on building an ecosystem of hybrid cloud solutions for Alibaba Cloud's Apsara Stack. Optimized for Intel® Xeon® Scalable processors, the Apsara Stack provides large- and medium-sized businesses with on-premises hybrid cloud services that function the same as hyperscale cloud computing and big data services provided by Alibaba public cloud. This alliance will also enable small- and medium-sized businesses (SMBs) to access technologies, infrastructure and security on par with that of large corporations, while offering them a path to greater levels of automation, self-service capabilities, cost efficiencies and governance.

Alibaba and Intel Transforming Data-Centric Computing from Hyperscale Data Centers to the Edge

How They Power eCommerce: In preparation for the upcoming 11/11 "Singles Day" global shopping festival – which generated in excess of 168.2 billion yuan ($25 billion) in spending during the 2017 celebration – Alibaba plans to trial the next-generation Intel Xeon Scalable processors and upcoming Intel® Optane® DC persistent memory with Alibaba's Tair workload. This workload is a key value data access and caching storage system developed by Alibaba and broadly deployed in many of Alibaba's core applications such as Taobao and Tmall. Intel's compute, memory and storage solutions are optimized for Alibaba's highly interactive and data-intensive applications. These applications require the infrastructure to keep large amounts of hot accessible data in the memory cache to achieve the desired throughput (queries per second) in order to deliver smooth and responsive user experiences, especially during peak hours of the 11/11 shopping festival.

How They Accelerate the Olympics' Digital Transformation: Also announced was a partnership aimed at advancing the digital transformation of the Olympics and delivering volumetric content over the OBS Cloud for the first time at the Olympic Games Tokyo 2020. As worldwide Olympic partners, Intel and Alibaba Cloud, will collaborate with OBS to explore a more efficient and reliable delivery pipeline of immersive media to RHBs worldwide that will improve the fan experience and bring them closer to the action via Intel's volumetric and virtual reality technologies. This showcases the depth of Intel's end-to-end capabilities, including the most advanced Intel Xeon Scalable processors powering OBS Cloud, compute power to process high volumes of data, and technology to create and deliver immersive media.

How They Accelerate the Commercialization of Intelligent Roads: Intel officially became one of Alibaba AliOS' first strategic partners of the intelligent transportation initiative, aiming to support the construction of intelligent road traffic network and build a digital and intelligent transportation system to realize vehicle-road synergy. Intel and Alibaba will jointly explore v2x usage model with respect to 5G communication and edge computing based on the Intel Network Edge Virtualization Software Development Kit (NEV SDK).
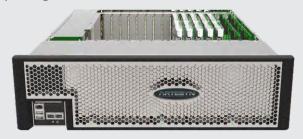
More Context: Intel and Alibaba Cloud Deliver Joint Computing Platform for AI Inference at the Edge

(1) Automated product quality data collected by YuMei using JWIPC® model IX7, ruggedized, fan-less edge compute node/industrial PC running an Intel® Core™ i7 CPU with integrated on die GPU and OpenVINO SDK. 16GB of system memory, connected to a 5MP POE Basler* Camera model acA 1920-40gc. Together these components, along with the Intel developed computer vision and deep learning algorithms, provide YuMei factory workers information on product defects near real-time (within 100 milliseconds). Sample size >100,000 production units collected over 6 months in 2018.

New MaxCore™ Industrial PC Platform

Tempe, Arizona, USA — Artesyn Embedded Technologies today announced a new member of its MaxCore™ platform family of computing servers. The MaxCore Industrial PC (IPC) platform offers high-performance, high-density and scalable versatility for developers of industrial applications such as machine vision, video surveillance, data acquisition and control, data analytics and fog computing.

Based on the PCI Express architecture, the MaxCore IPC platform can meet a wide range of compute, I/O, or image processing requirement using Artesyn, third-party, or custom PCIe cards. The MaxCore IPC platform has an Intel® Xeon® processor D based motherboard connected with 15 PCIe slots, 13 of which are full-length and full-height, to support a heterogeneous mix of compute, I/O, acceleration and storage. The PCIe card slots support high powered, double-wide GPU cards, to provide a range of acceleration options. Four DDR4 DIMM memory slots in the system can provide up to 128 GB RAM. Flexible storage is available with Artesyn's series of PCI Express add-in cards that allow developers to add NVMe M.2 form factor SSD modules to the platform. The system offers a web-based graphical software management interface.

The 3U (5.25 inches, 133.4 mm) high system is just 508mm deep and designed for mounting in standard 19-inch server racks. The system operates on up to two integrated 1100-watt AC power supply providing up to 150 watts per PCIe slot. The system has capacity for up to three 1100-watt power supplies for redundancy. The MaxCore IPC platform has cooling capacity for up to 1800 watts at 40 degrees Celsius.

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