



DDN Strengthens its HPC Storage Leadership with New Solutions and Next Generation Monitoring Tools

Latest Customer Wins Underscore DDN's Leadership in HPC Storage; DDN to Demonstrate New HPC Storage Solutions and Integrated Product Suite at SC17

SC17 (Booth #1325), DENVER, Colo. and SANTA CLARA, Calif. – November 13, 2017 – DataDirect Networks (DDN®) today announced new high-performance computing (HPC) storage solutions and capabilities, which it will feature this week at the International Conference for High Performance Computing, Networking, Storage and Analysis (SC17) in Denver, Colorado. The new solutions include an entry-level burst buffer appliance (IME140) for cost-effective I/O acceleration, a next generation monitoring software (DDN Insight), and the company's new declustered RAID solution (SFA Declustered RAID "DCR") for increased data protection in massive storage pools. DDN also announced recent HPC customer wins in some of the world's largest supercomputing centers.

"Modern HPC workflows require new levels of performance, flexibility and reliability to turn data and ideas into value," said John Abbott, founder and research VP, 451 Research. "With its long-standing HPC storage heritage, DDN is strongly positioned with closely integrated components that can deliver extreme I/O performance, comprehensive monitoring at scale and new levels of data protection."

[Tweet this:](#) It's all about accelerating HPC workflows & insights! Join #HPC leader @DDN_Limitless at #SC17 to see how. Booth 1325 <http://bit.ly/2AdCUMP>

New DDN Solutions and Next Generation Monitoring Tools

HPC and data-intensive enterprise environments are facing new pressures that stem from higher application diversity and sophistication along with a steep growth in volume of active datasets. These trends present a tough challenge to today's filesystems in delivering the performance and economics to match business needs and compute capability. In addition, as rotational drive capacities grow the risk of data loss increases due to longer drive rebuild times. DDN's latest technology innovations deliver the enhanced performance, flexibility and management simplicity needed to solve these challenges and to accelerate large-scale workflows for greater operational efficiency and ROI.

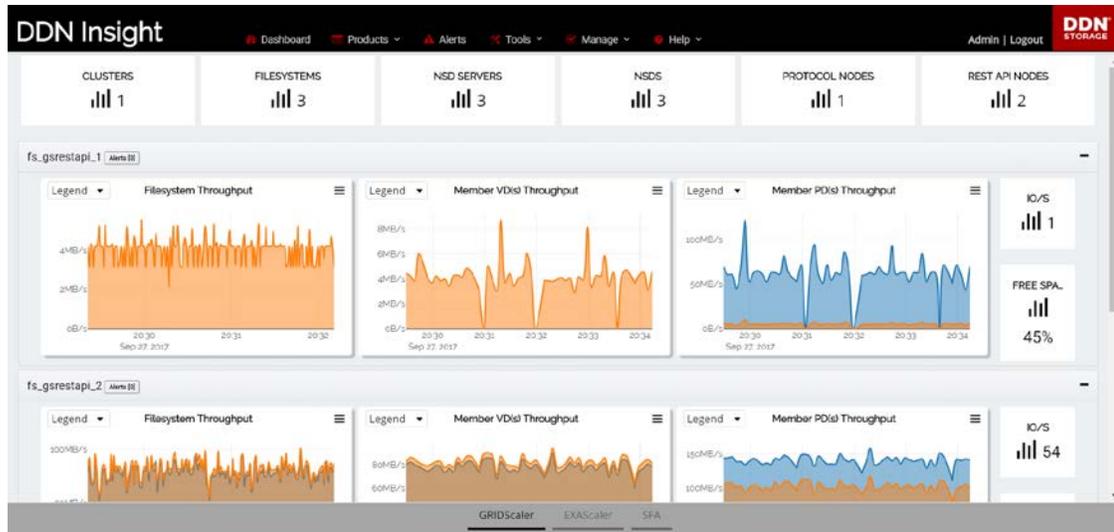
- **DDN IME140**

DDN has expanded its IME® product line with the new IME140 that makes IME scale-out flash accessible to more organizations at lower cost. The IME140 supports extreme file performance in a small 1U flash data appliance. Each appliance can deliver more than 11GB/s write and 20GB/s read throughputs and more than 1M file IOPs (read and write). Starting with a resilient solution as small as 4 units, the IME140 allows organizations to cost-effectively scale performance independent of amount of capacity required. Traditional parallel file systems often cannot keep pace with the mixed I/O requirements of modern workloads and fail to deliver the potential of flash. The IME software implements a faster, leaner data path which delivers to applications the low-latencies and high throughputs of NVMe. The IME140 1U building block

allows organizations to intelligently apply fast flash where it is needed, while maintaining cost-effective capacity on HDD within the file system.

- **DDN Insight**

DDN Insight is DDN's next-generation monitoring software. Easy to deploy, DDN Insight allows customers to monitor the most challenging environments at scale, across multiple file systems and storage appliances. With DDN Insight customers can quickly identify and address hot spots, bottlenecks and misbehaving applications. Tightly integrated with SFA®, EXAScaler®, GRIDScaler® and IME, DDN Insight delivers an intuitive way for customers to comprehensively monitor their complete DDN-based ecosystem.



- **DDN SFA Declustered RAID (SFA DCR)**

The growth of drive capacities, as exemplified by the recently released 12TB Near Line SAS drive, has exposed the limitations and inflexibility of traditional RAID configurations. Since traditional RAID pools are constrained to a small drive count, rebuild times can become long due to the limited spindles supporting the rebuild operation. This limitation exposes storage systems to long periods of performance degradation during rebuilds and higher potential data loss due to multiple simultaneous disk failures. DDN's SFA systems have mitigated these limitations using an overprovisioned backend and highly optimized rebuild algorithms. Now DDN's new SFA Declustered RAID (DCR) goes a step further removes the constraint of a small, fixed drive count RAID pools and allows data and parity information to be distributed among a much larger, user configurable, number of disks. Offered on DDN's SFA14KX®, DCR improves data resilience and provides faster rebuild times, higher IOPs performance, larger virtual drives, and increased storage efficiency, among other benefits.

Availability

The DDN IME140 will ship in volume in the first quarter of 2018. The SFA DCR is shipping today with the SFA14KX, and DDN Insight monitoring software is integrated and shipping today with DDN's SFA, EXAScaler, GRIDScaler and IME solutions.

Recent HPC Customer Wins

Deployed in thousands of HPC and mission critical environments worldwide, DDN's solutions have been designed, engineered and proven in the world's most scalable data centers. New DDN customers include:

- **The Korea Institute of Science and Technology Information (KISTI).** As one of Korea's top Research and Development (R&D) institutes in science and technology infrastructure, KISTI is the only such institute that operates a large-scale supercomputer for public use. KISTI's fourth-generation supercomputer, KISTI-4, installed in 2008, had reached its maximum capacity and was experiencing a shortage of computing resources, escalating TCO and declining efficiency. In early 2018, it will replace KISTI-4 with a new KISTI-5 supercomputing system to meet its increasing computing resource needs and to provide computing infrastructure for high performance computing, machine learning, big data analysis, high throughput computing and cloud services.

KISTI is currently utilizing DDN Lustre* with two SFA12K® appliances and an SFA7700® for the KISTI-4 Supercomputer, and recently selected DDN's HPC storage, including forty DDN IME240, eleven ES14KX® and two SFA7700X® appliances, for its new KISTI-5 Supercomputer.

- **National Institute of Advanced Industrial Science and Technology (AIST).** As one of the largest public research organizations in Japan, AIST focuses on the creation and practical realization of technologies useful to Japanese industry and society. AIST bridges the gap between innovative technological seeds and commercialization. With an emphasis on artificial intelligence (AI), AIST needed a storage solution that delivered strong performance, stability, cost-effectiveness and scalability. DDN assisted AIST in designing a system utilizing a 22PB GRIDScaler with SFA14KX® and 600TBs of SSD.

SC17 Conference

DDN will showcase its latest storage solutions and innovations in HPC leadership, including EXAScaler, GRIDScaler, all-flash SFA14KX, IME240 and IME140, and WOS at the SC17 conference in Denver, Colorado, at DDN booth #1325. In addition to solution demonstrations, DDN will also highlight customer use cases, including Ohio Supercomputing Center, Tokyo Tech, JCAHPC, GA Tech and Compute Canada. Join DDN for its SC17 Technical Panel discussion and other key events:

- **SC17 Technical Panel**
Topic: "Best Practices for Architecting Performance and Capacity in the Burst Buffer Era"
Panel Moderator: Addison Snell, CEO of Intersect360 Research
Panelists: James Coomer, DDN
Sadaf R. Alam, Swiss National Supercomputing Centre (CSCS)
Pamela Hill, National Center for Atmospheric Research (NCAR)
Dirk Pleiter, Jülich Supercomputing Centre (JSC)
Chris Zimmer, Oak Ridge National Laboratory (ORNL)
10:30 a.m. – 12:00 p.m. MT, Wednesday, November 15, 2017
Room 201/203
- **DDN User Group:** DDN is hosting its *Kick-off SC17 User Group* on Monday, November 13, from 2:30 p.m. – 6:30 p.m., and will highlight ways that leading global organizations are assessing and leveraging technology to raise the bar on HPC innovations and best practices. To attend the User Group, register [here](#).
- **DDN SC17 After-Party Bash:** Join DDN and co-hosts, HGST and SanDisk, for the hottest SC17 after-party with live music, food and drinks at Mile High Station in downtown Denver on Tuesday, November 14, at 7 p.m. MT. With rolled cigars, music, and a venue that offers its own

special ambience, DDN's bash promises to once again be the most talked about SC party of the year. Tickets are required for admittance and are available at DDN booth #1325 or at the DDN User Group.

- **Meet with DDN:** DDN executives, senior level engineering staff and industry workflow experts will be available to meet at DDN booth #1325 to discuss the latest DDN technology products and innovations. To schedule a meeting with DDN, click [here](#).

Supporting Resources

- More on [DDN IME](#)
- More on [DDN SFA14KX and SFA DCR](#)
- More on [DDN End-to-End Storage and Big Data Platforms](#)
- More on [DDN at SC17](#)
- More on [DDN Customers](#)

About DDN

DataDirect Networks (DDN) is the world's leading big data storage supplier to data-intensive, global organizations. For almost 20 years, DDN has designed, developed, deployed and optimized systems, software and storage solutions that enable enterprises, service providers, universities and government agencies to generate more value and to accelerate time to insight from their data and information, on premise and in the cloud. Organizations leverage the power of DDN storage technology and the deep technical expertise of its team to capture, store, process, analyze, collaborate and distribute data, information and content at the largest scale in the most efficient, reliable and cost-effective manner. DDN customers include many of the world's leading financial services firms and banks, healthcare and life science organizations, manufacturing and energy companies, government and research facilities, and web and cloud service providers. For more information, go to www.ddn.com or call 1-800-837-2298.

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