## NetApp

NetApp Introduces Unified Scale-Out Storage Systems and Virtualization Software for the Unbound Cloud Era

Customers moving to unbound clouds struggle to manage their data freely across both private and public clouds. To address this challenge, NetApp delivers new unified, scaleout innovations that enable enterprise customers to flexibly and efficiently manage and control their data through a single storage and data management platform.

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- The new FAS8000 series scale-out enterprise storage systems are NetApp's most powerful and feature-rich storage systems with superior I/O flexibility to simplify and eliminate complex upgrades as IT needs change.
- With the new FlexArray virtualization software, NetApp V-Series becomes a software option that can be licensed on the FAS8000. FlexArray enables the FAS8000 to virtualize and manage multi-vendor data storage platforms, paving the way for software-defined storage.
- The latest release of clustered Data ONTAP® helps organizations seamlessly scale-out operations and manage data consistently and without disruption across both private and public cloud environments.

George Kurian, Executive Vice President, Product Operations, NetApp

"As they adapt their IT operations to improve service delivery and embrace cloud mandates, CIOs recognize the advantages of shared storage infrastructures. Our proven, flash-accelerated FAS enterprise storage systems combine scale-out innovation and rich data management capabilities in a single unified platform. Our new FAS8000 series and enhanced software offerings allow customers to respond quickly to changing business needs, move seamlessly to an era of unbound clouds, and eliminate the overprovisioning of people, time, and money."

News Summary

With more organizations embracing cloud mandates and moving quickly to flash-accelerated, shared storage infrastructures, NetApp introduced today a new line of enterprise storage systems and enhanced software designed to accelerate the broadest range of virtualized applications.

- The new NetApp® FAS8000 series is the first enterprise storage system to unify SAN, NAS and storage virtualization into a single hybrid array. It is NetApp's first FAS platform designed specifically for scale-out storage environments built on clustered Data ONTAP.
- The new FlexArray virtualization software enables existing storage to be managed by Data ONTAP for a greater return on investment and makes legacy storage cloud-ready. The software enables the FAS8000 to virtualize and manage third-party arrays and delivers a nine-month payback guarantee.[1]
- The new release of clustered Data ONTAP, version 8.2.1, extends nondisruptive operations (NDOs) and improves data security and management of CIFS environments.

NetApp centers on its innovation strategy for flash-accelerated, cloud-integrated storage solutions for the broadest range of shared and dedicated infrastructure environments. Data is at the heart of business innovation, and NetApp helps organizations free data to move unbound across private and public clouds. Its industryleading enterprise storage systems and software meet customer needs across any workload, any deployment model, and any data type. Technology News in Depth

- FAS8000 Enterprise Storage Systems Deliver a Unified Scale-Out Platform to Adapt to Changing Business Needs Quickly and Efficiently
- The FAS8000 supports the broadest range of SAN and NAS workloads with a single system optimized for scale-out deployments. The new storage systems can improve performance (up to 2x) and deliver better flash acceleration benefits (up to 3x more flash) than previous FAS platforms.[2] Additional improvements with the FAS8000 include a new, storage I/O–optimized architecture including the Intel® microarchitecture (formerly code-named Sandy Bridge), expanded memory, and improved flash support to deliver superior, low-latency performance for enterprise-class workloads.
- Organizations can invest in the right long-term platform with the FAS systems and transition their applications confidently to a private, public, or hybrid cloud deployment by leveraging the highly adaptive, patented Data ONTAP operating system and best-in-class connectivity options. The FAS8000 provides an enterprise storage solution that enables a high return on investment and accelerates resource-intensive applications with hybrid flash arrays that give more than 2.6M IOPs of flash-integrated, low-latency performance.
- FlexArray Virtualization Software Enables Easy Storage Virtualization and Management
- FlexArray Virtualization Software enables customers to use existing storage as FAS capacity for a greater return on assets and to deliver Data ONTAP value to more IT operations. FlexArray supports SAN and NAS, without complex addons, and it allows customers to unify their IT architecture under a common data management umbrella that is easy to manage and offers leading application integration and data protection. This is the foundation for software-defined storage, enabling organizations to provision and consume

storage services based on policies and to deploy resources on a wide range of hardware. FlexArray software can be purchased and enabled at any time on the FAS8000.

- Clustered Data ONTAP Provides a Universal Data Platform for the Hybrid Cloud
- With clustered Data ONTAP, organizations can help eliminate planned downtime and service their infrastructure without disrupting access to user data and applications. Organizations have the ability to add or replace storage shelves without disruption to business operations and access improved data security and the management of Microsoft® CIFS environments. Clustered Data ONTAP simplifies and automates the delivery of IT services to users and applications, making it the ideal foundation for private, public, and hybrid clouds.
- Leadership in Flash-Accelerated Storage Solutions
- In 2013, NetApp expanded its flash offerings and extended its leadership in enterprise flash storage. With the strongest and broadest flash portfolio in the industry, NetApp offers a complete line of products, including intelligent caching technologies and all-flash arrays that provide the flexibility and choice to maximize the value of flash across the entire compute, network, and storage stack. To date, NetApp has shipped nearly 75PBs of flash storage. NetApp's storage portfolio and extensive, open partner ecosystem deliver the responsiveness IT customers need to achieve more with their resources, advance new opportunities, and be ready for the unanticipated.

The FAS8000 enterprise storage systems, FlexArray virtualization software, and clustered Data ONTAP 8.2.1 are available today. Additional Industry Perspective

- George Kurian, Executive Vice President, Product Operations, NetApp
- Watch NetApp Executive Vice President George Kurian discuss how NetApp help customers transform their organization and

business through data management and storage innovation.

- Tim Frazier, Chief Information Officer, National Ignition Facility (NIF) at the Lawrence Livermore National Laboratory
- Watch NIF CIO Tim Frazier discuss how the facility drives energy research and scientific discovery.

Supporting Quotes:

Industry Analyst Quote

- Ashish Nadkarni, Research Director, Storage Systems and Big Data Research, IDC
- "CIOs and IT executives are constantly looking to simplify operations, make infrastructure decisions that can scale to demand, and deliver a solid return on investment for their organizations. Building or implementing cloud-supported infrastructures however requires storage and data management product and solutions that satisfy cloud requirements. With the introduction of its new enterprise storage systems and software, NetApp is innovating the underlying storage infrastructure in such a way that enables this type of flexible and efficient data storage infrastructure."

Customer Quotes

- Dan Timko, President and CTO, Cirrity
- "As a cloud service provider, you don't necessarily know the peaks and valleys of a new customer's workloads. With NetApp's clustered Data ONTAP and Flash Cache in our systems, we can handle those peak times, scale-up and scaleout as needed and ensure that our operations are never down thanks to the centralized management system."
- Michael Tran, CTO, Digital Sense
- "As a cloud service provider, our growth and utilization is unpredictable. Clustered Data ONTAP delivers Digital Sense a solution that allows dynamic scale up and scale out, in order to meet our customers' demands in a totally nondisruptive manner. We're able to deliver storage through NetApp's multi-protocol storage systems to all of our customers, using the exact same technologies they already

know and trust. This makes moving to the cloud much easier. NetApp's flash technology enables us to deliver extreme performance across all tiers of storage. Most importantly, it provides us a cost effective method to deliver scale-out, reliable storage to compete with international cloud offerings."

- Tim Frazier, CIO, National Ignition Facility (Lawrence Livermore National Laboratory)
- "The National Ignition Facility at Lawrence Livermore Labs is home to the world's largest laser and scientific teams that conduct critical research that could solve some of the most critical problems of our time. A key IT priority is to continuously improve uptime and availability of computing environments for our scientists. Having a unified cluster architecture such as clustered Data ONTAP is incredibly valuable to help ensure that we maintain constant data availability and can scale-out as needed to handle the large amounts of data being generated and analyzed."
- Michael Clark, CTO, Photobucket
- "Photobucket stores more than 14 billion images and videos with five million uploaded to our site daily, so having an IT infrastructure that can support continuous operations for our cloud-based service is critical. With the new FAS8000 systems and clustered Data ONTAP, we have access to a unified, scale-out architect that enables us to scale on demand, delivering significantly improved operational efficiencies and directly impacting customer satisfaction."
- Adam Padee, Head of Computational Infrastructure, Poland's National Centre for Nuclear Research
- "Achieving reliability and speed with a single storage platform has traditionally been challenging for us. The combination of clustered Data ONTAP and FAS systems with Flash Cache solved that problem and is dramatically helping us accelerate our research. We now have performance, stability, and simplicity in a single system, which makes life easier for both

IT and our scientists."

- Steve Wesling, IT Operations/Network Manager, Tri-State Electric
- "As an electric power supplier, the ability to operate with nearzero downtime is absolutely critical to our business. Clustered Data ONTAP gives us a highly available storage platform with the ability to scale out so that we can accommodate unforeseen spikes in growth without downtime or forklift upgrades. With clustered Data ONTAP, our energy production business benefits from a better performing, more resilient storage infrastructure, allowing us to exceed the timeline that we'd originally planned for deployment of our private cloud."

Alliance Technology Partner Quotes

- Satinder Sethi, Vice President, Data Center Solutions, Cisco
- "For more than a decade, Cisco and NetApp have successfully partnered to bring innovations, like FlexPod, that accelerates IT's ability to build internal and external cloud services spanning multiple sites, and connect the business to its data. Our combined focus is to make sure our customers' cloud strategy benefits the goal of their IT organization for the long term. Together we can help our customers use their data center investment to address the challenges of the cloud era."
- Krishna Subramanian, Vice President, Cloud Products Group, Citrix
- "NetApp and Citrix have successfully delivered innovative solutions through our long-standing partnership that help our customers leverage the efficiency and agility of cloud architectures. NetApp's new FAS8000 solutions together with Citrix CloudPlatform will provide a simple infrastructure for customers to scale out their environments without over-provisioning, while seamlessly managing data and applications across hybrid clouds."
- Sanjay Katyal, Vice President, Global Strategic Alliances, VMware

• "Organizations are moving to the cloud to meet the needs of the mobile workforce. NetApp and VMware have worked together to build a global presence and deliver collaborative solutions to build a more efficient cloud computing environment for organizations of all sizes. The new FAS8000 products with VMware solutions will provide customers with a unified and simple platform to easily scale out storage environments in the cloud."

Additional Resources

- Read more on today's announcement "Innovation without Chaos, Harnessing the Hybrid Cloud"
- Discover how NetApp helps enable seamless data management across multiple clouds
- Learn more about NetApp's flash strategy
- Read about our partner offerings on Solution Connection
- Review NetApp's nine month Payback Guarantee Program About NetApp

NetApp creates innovative storage and data management solutions that deliver outstanding cost efficiency and accelerate business breakthroughs. Our commitment to living our core values and consistently being recognized as a great place to work around the world are fundamental to our long-term growth and success, as well as the success of our pathway partners and customers. Discover our passion for helping companies around the world go further, faster at www.netapp.com.

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[1] www.netapp.com/payback-guarantee

[2] www.netapp.com/us/products/storage-systems/fas8000

FAS8000, FlexArray, CDOT

Supporting Quotes Sheet

Technology Alliance Partners

- Jason Nolet, Vice President, Data Center Switching and Routing, Brocade
- "In supporting the broadest range of SAN and NAS workloads, NetApp's new FAS 8000, networked by either Brocade's Ethernet fabric or Fibre Channel solutions, provides an optimal infrastructure for enterprises looking for industry leading performance, scalability and flexibility in their scaleout data center environments. Brocade Gen 5 Fibre Channel solutions deliver optimal connectivity for application workloads supported by the FAS 8000's flash capabilities, with both Brocade fabrics supporting clustered Data ONTAP to provide a highly flexible, simple, and reliable infrastructures."
- Flavio Santroni, CEO, Catalogic Software
- "Catalogic Software and NetApp are providing our joint customers with the most innovative data protection solutions available today. Catalogic is pleased to extend its enterprise data cataloging and intelligent data protection software to support NetApp's FAS8000. Customers may reduce backup times by 90 percent or more and recover data within minutes with Catalogic Software, fully integrated with NetApp storage."
- David West, Senior Vice President, Worldwide Marketing and Business Development, CommVault
- "CommVault and NetApp are working with thousands of joint customers to help them easily and quickly manage, protect and recover critical data. Together our solutions enable customers to easily access their data in the cloud, from anywhere at any time. By continuing to deliver innovation for data-driven organizations, NetApp and CommVault are helping enterprises transform the value of their information and stay ahead of customer needs as the industry rapidly

changes."

- Mark Coggin, Senior Director, Product Marketing, Red Hat
- "For a decade, Red Hat and NetApp have collaborated to create enterprise IT solutions to help customers grow and manage their business. The combination of Red Hat Enterprise Linux software combined with NetApp cloud solutions help builds an infrastructure to meet the current and future business demands."

NetApp Distributors and Resellers

- Roger Niles, Director of Sales, Clearshark
- "Clustered Data ONTAP and virtual storage tiering tools have combined for an optimal private cloud architecture that is enabling our customers to efficiently scale their infrastructure. Specifically, the combination of NetApp's flash, solid state, and standard disk technology in a scale out architecture, have proven to be a cost effective way for our customers to deliver remarkable performance and capacity to a continually growing user base. NetApp's success with clustered Data ONTAP has been key to our growth and ability to support our customers in their private cloud initiatives."
- Kent Christensen, Director, Virtualization and Cloud Practice, Datalink
- "Amid rapid change and growth of data, organizations are transforming IT to deliver greater agility and flexibility. Datalink helps organizations navigate to IT as a Service (ITaaS) models and will leverage NetApp's new line of unified, scale-out storage to deliver faster provisioning, greater flexibility, and lower costs. These innovations, coupled with Datalink's full lifecyle of IT transformation services, help organizations realize the full potential of service-oriented IT delivery models and deliver tangible results to the business."
- Mark Melvin, CTO, ePlus
- "As NetApp's top FlexPod partner, ePlus has had tremendous

success helping customers leverage the performance and cost benefits of the FAS platform and clustered Data ONTAP. We look forward to continued growth of next generation enterprise storage with the introduction of NetApp's FAS8000, which will help customers further balance cost, opportunity, and risk as they bring more of their Tier 1 workloads into a NetApp or FlexPod architecture."

• Bob Olwig, Vice President, Business Strategy and Innovation, WWT

"NetApp's diverse set of products, coupled with our own portfolio and products from our partner ecosystem, helps our customers leverage advanced IT solutions to achieve breakthrough gains in business performance. The FAS platform and clustered Data ONTAP operating system have proven highly successful in helping our customers deploy new IT resources and accelerate growth."