A COMMON VISION

Transitioning to the Cloud with NetApp and Intel

CLOUD STORAGE SOLUTIONS FROM NETAPP AND INTEL

NetApp Clustered Data ONTAP®

NetApp® FAS Storage Systems

NetApp® All Flash FAS

NetApp® E-Series Storage Systems with SANtricity® OS

NetApp® EF-Series All-Flash Arrays

Intel® Xeon® Processors

Intel® Ethernet Controllers

Enterprise data centers are experiencing unprecedented change and massive data growth. Users are becoming more sophisticated, requiring IT to respond with greater flexibility and responsiveness, while public cloud services vye for the enterprise budget.

NetApp and Intel work together to help enterprise IT organizations overcome current challenges by transitioning to next-generation storage architectures—such as hybrid clouds that provide the benefits of public cloud services while addressing enterprise security concerns.

With 20 years of comprehensive collaboration building NetApp storage systems based on Intel® processors, the companies share a vision for harnessing new and existing technologies to help businesses stay in the driver's seat when managing IT in a fast-changing landscape.

Non-disruptive, high-availability cloud storage solutions based on NetApp clustered Data ONTAP® and Intel® Xeon® processors help businesses meet data growth challenges and transition to a hybrid cloud, achieving the ideal blend of private and public cloud resources.

With NetApp and Intel, technology is no longer a barrier to moving data to the optimum location to maximize business return.

"Intel® processors are foundational to NetApp innovation, powering all FAS and E-Series systems.

Through joint development efforts, Intel® Xeon® processors are specifically designed to maximize NetApp product functionality."

—Maria Olson
Vice President
Worldwide Strategic Alliances
NetApp

Today's IT Challenge

Businesses need highly flexible, responsive IT architectures to support massive data growth amid a rapidly changing business environment. Worldwide, the volume of data is doubling every two years, according to IDC, and is set to swell to an astounding 44 zettabytes by 2020.[1] Adding to the challenge, IT organizations and cloud services providers must scale to support this growth while:

- Deploying applications and managing data without service interruptions.

- Controlling and moving data across private, public, and hybrid clouds.

- Integrating applications, services, and technology from multiple sources across an increasingly complex environment.

NetApp and Intel work together to help businesses meet these challenges with solutions based on a shared view of the future.

NetApp and Intel: Working Together to Solve Storage Challenges

For more than 20 years, NetApp and Intel have worked together to solve businesses' largest storage and data management challenges. This enduring relationship spans areas from engineering to marketing.

- The two companies employ each others' technology, including the use of Intel processors to underpin NetApp storage systems that support businesses worldwide.

- NetApp and Intel collaborate closely to facilitate adoption of open technologies, including OpenStack*, and to drive increased performance, reliability, and scalability of "Third Platform" software-defined storage solutions for applications such as big data analytics.

- The companies cooperate on initiatives to assist businesses in reducing the risk of adopting innovative ways to deliver IT, such as a program for evaluating and implementing new converged infrastructure technologies.

- So that their collaboration continues to deliver maximum value to customers over the long term, NetApp and Intel also team on joint product planning to align their respective product roadmaps.

- Thousands of customers have taken advantage of Intel and NetApp co-branded activities to share experiences and best practices, including thought-leadership sessions, round tables, and peer-to-peer networking.

Solutions for Managing Data Growth

Scale-out storage solutions from NetApp and Intel enable customers to manage data growth and accelerate responsiveness across private, public, and hybrid clouds.

Nondisruptive operations. Intel Xeon processor-based AFF and FAS systems running NetApp clustered Data ONTAP can provide continuous access with zero downtime for upgrades, refreshes, and replacements. IT organizations benefit from storage technology that's trusted by organizations worldwide: NetApp Data ONTAP is the world's #1 open networked branded storage operating system, according to IDC.[2]

Proven efficiency. Comprehensive storage efficiency techniques drive OpEx and CapEx cost reductions by reducing storage space requirements and the amount of data traveling over the network. Standard features with clustered Data ONTAP include inline deduplication, inline compression, and thin provisioning.

Seamless scalability. NetApp storage systems support SAN and NAS workloads and can scale from terabytes to tens of petabytes transparently and without reconfiguring running applications. Increase performance with NetApp® All Flash FAS systems delivering more than 4 million IOPS and nearly 5 PB of all-flash capacity. Unified networking with Intel® 10 Gigabit Ethernet controllers delivers cost-effective performance for storage networks.

A Foundation Designed for Cloud

Wherever your company is on its path to the cloud, NetApp and Intel can provide solutions to meet your business goals.

Hybrid cloud is emerging as the model that will dominate over time; most enterprises will use a mixture of private storage and cloud service providers, including the largest "hyperscale" clouds. The problem is that the world of hybrid clouds today consists of non-operational, isolated, incompatible data silos. It is extremely difficult to move large amounts of data between clouds or share data across private and public clouds. This creates a barrier to building a highly flexible architecture that enables you to respond to rapidly changing business demands.

With NetApp and Intel, technology is no longer a barrier that hinders you from moving data to the right location to maximize business return. NetApp's vision of the future of data management is the Data Fabric, which gives you the freedom to seamlessly manage your data across the hybrid cloud. You can move data where you need it most, so you can innovate faster and make the best decisions for your organization.

Cloud service providers, as well as enterprises, are widely adopting NetApp and Intel® solutions. More than 300 cloud service providers—including some of the largest hyperscale clouds and 12 of the top 15 suppliers overall—build cloud services using NetApp storage based on Intel processors.

NetApp converged infrastructure solutions simplify build-out of private and public clouds. They include FlexPod*, powered by NetApp, Cisco, and Intel, which delivers cloud services faster and with minimal business disruptions. Enterprises and cloud providers can take advantage of proven cloud infrastructure, services, and solutions based on NetApp and Intel® technology from a strong ecosystem of suppliers.

High-Performance Solutions

Solutions from NetApp and Intel support applications that require the highest levels of performance as well as uninterrupted operations.

High-performance computing (HPC). Technical and computing environments use NetApp storage for diverse applications including financial trading, semiconductor design, and weather forecasting.

Media and entertainment solutions. Film, animation, and social-media firms require high-speed I/O to rapidly transmit and process terabytes of unstructured media. Hundreds of broadcast and cable enterprises—including Antena3, BBC, CBS, Comcast, France Televisions, Turner, and Sky News—run their media operations on high-speed production, archive, and delivery architectures based on NetApp storage solutions.

Future-forward Alliance

Based on an enduring partnership that has lasted more than two decades, NetApp and Intel continue to develop solutions that help businesses stay in the driver's seat when it comes to managing IT in a fast-changing business landscape. Today, NetApp and Intel work together to help businesses manage the transition to hybrid cloud while supporting massive data growth driven by trends including the Internet of things (IoT).

"Cloud deployments require efficiency, availability, and scalability whether you're developing private, public, or hybrid clouds.

NetApp clustered Data ONTAP® provides unified scale-out storage that enables your data to move without disruption between different cloud platforms."

—Bev Crair
Vice President, Data Center Group
General Manager, Storage Group
Intel Corp.

WATCH ONLINE

NetApp and Intel:
A Common Vision
for Unified, Virtual IT
Infrastructure
www.youtube.com/
watch?v=hRz67F6J3N8

NETAPP AND INTEL DELIVER DATA STORAGE SOLUTIONS FOR BUSINESS-CRITICAL OPERATIONS

University of São Paulo

To create a fast and flexible IT infrastructure that could stay a step ahead of users' needs, Brazil's largest public university consolidated 150 disparate IT environments into a massive private cloud based on FlexPod® Datacenter. The project slashed delivery time for IT services from months to minutes and delivered a mobile-enabled cloud platform for remote research and online instruction. The cloud reduced storage requirements by 90 percent despite 300 percent growth in data, and freed 30 percent of IT headcount for strategic projects.

University of São Paulo Sets the Curve for Cloud in Education
www.netapp.com/us/media/cs-usp.pdf

Mansfield Oil

To support massive fuel-delivery and other logistics operations, Mansfield Oil needs its core business applications to be available 24/7—without planned or unplanned downtime—to power superb customer service. The company transformed IT into a services-based organization using NetApp storage systems. Besides eliminating downtime, the solution reduced time to market for new applications and services by 50 percent while improving quality. It also minimized risk by increasing agility in hardware upgrades, data migrations, and disaster recovery.

Mansfield Oil Keeps Fuel Deliveries Flowing Without Planned or Unplanned Downtime
www.netapp.com/jp/media/cs-mansfield-oil.pdf

Apache Corporation

To stay ahead of competitors, oil and gas exploration company Apache Corp. needed to enable geoscientists around the world to quickly access and analyze growing volumes of seismic data. The company integrated NetApp and other technologies to deliver high availability and performance, and speed time to discovery of resources. The solution supported 700 percent data growth with no additional head count, with 52 percent lower cost per TB, 66 percent power savings, and 59 percent space savings.

Apache Corporation Fuels Oil and Gas Exploration with over 18PB of Data
www.netapp.com/us/media/cs-179-apache-0913.pdf

Visit www.netapp.com and www.intel.com/go/storage to learn more about collaborative storage solutions.