NINE REASONS WHY NETAPP ONTAP FLASH STORAGE IS THE SMART CHOICE FOR BUSINESS
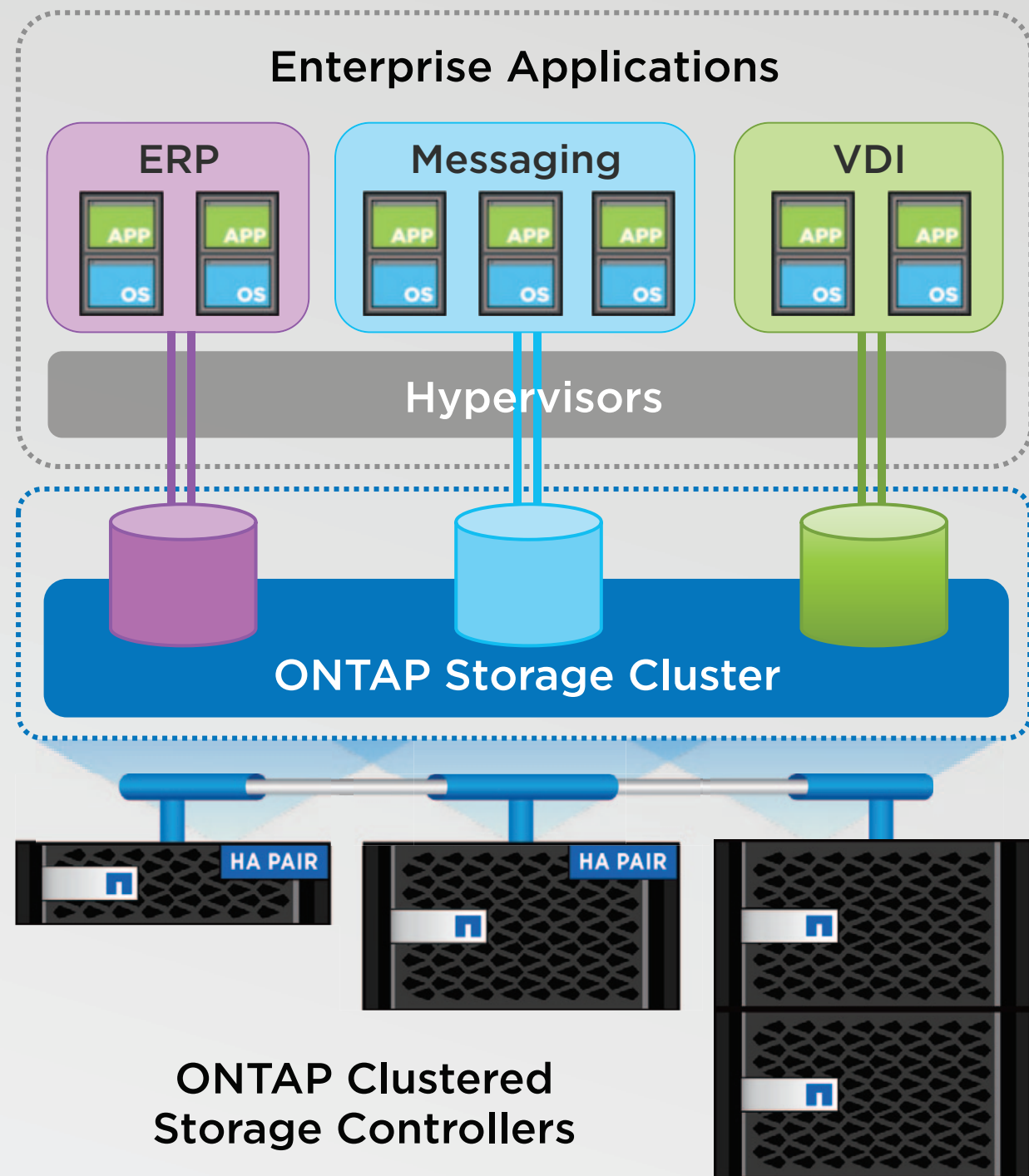
NetApp

Why It Matters

With customers demanding higher service levels, enterprise applications need to be fast and available 24/7. But as IT departments struggle to meet challenging service-level requirements, how can businesses keep up?

NetApp® ONTAP® based hybrid flash and all-flash storage might be the right answer for your IT challenges as flash becomes an important part of today's storage strategy. Flash storage is the obvious choice if you want to make the best use of your IT resources and get the most from your applications, but which flash solution should you choose?

The Benefits of ONTAP

Flash is a new and faster medium for storing data, but it is not a new way to store data. Data stored on flash still needs to be managed and protected, just as it has always been. This includes protection against failed devices, protection against data corruption (intentional and accidental), and facilities for disaster recovery. In the early days of flash adoption, customers were willing to sacrifice basic data management features for the sake of speed, but this is no longer the case. As flash storage has matured, the need for enterprise data management features has become a requirement.

Enterprise Applications

ERP · Messaging · VDI

Hypervisors

ONTAP Storage Cluster

ONTAP Clustered Storage Controllers

HA PAIR · HA PAIR

9 ONTAP

The NetApp Solution

ONTAP data management software offers a unified architecture that enables you to simplify your storage environment, reduce costs, and adapt to changing storage needs, on premises or in the cloud. Plus, ONTAP clusters are designed to deliver high performance and eliminate downtime, enabling you to service your infrastructure—even during regular business hours—without disrupting access to user data and applications.

You can start with a 20TB dual-node system and seamlessly expand your cluster up to 24 nodes and 360PB of effective capacity as business needs grow.

Let's take a look at the top reasons to move to a flash-based ONTAP environment.

1. Grow Your IT Infrastructure with Agility

How well businesses respond to growth can make or break their future. Investing in the right IT infrastructure is critical to keeping up with the developing (and often unexpected) requirements of a growing company.

The potential advantages of a more agile storage infrastructure are enormous. Adding new customers, bringing on new business applications, and hiring new employees can quickly put a significant strain on IT departments with limited resources.

With a NetApp ONTAP all-flash FAS solution, you can rapidly provision resources, deploy new applications, and enable same-day onboarding of new users. These capabilities enable you to increase productivity, improve product development, and accelerate time to revenue.

With ONTAP, you can rebalance capacity and workloads as needed. You can even avoid hot spots by moving data volumes to less active flash devices or by spreading workloads across multiple controllers. In short, each dataset gets the right resource to meet your performance and cost targets.

"We're rolling out Cerner [Health Services software] to our eight urgent care centers and long-term care facility, and NetApp is giving us great performance… With technologies like flash storage and ONTAP, we can meet new and increasing demands while minimizing our impact on IT staffing levels."

Scott Holtswarth, Director, Information Services
St. Luke's Hospital

2. Scale Your Business Without Scaling Your Staff

ONTAP makes both your storage and IT staff more productive and efficient, so you can scale your storage infrastructure without scaling your IT organization. ONTAP gives you the advantages of scale-up as well as scale-out.

NetApp ONTAP supports the broadest set of flash storage workloads and use cases for both SAN and NAS from a unified platform. This capability makes it possible for organizations of all sizes to scale capacity, performance, and operations without compromise, regardless of application. You can add capacity as you

grow across both SAN and NAS environments, and you can start small and grow big without the disruptive hardware upgrades required by other storage vendors.

Scale up individual storage controllers by adding high-capacity, low-latency SSDs, or scale out by adding additional storage controllers to a cluster. Most scale-out storage solutions merely provide a single data repository. ONTAP takes a different approach that gives you more flexibility and greater control. With NetApp ONTAP, you can create several content repositories. You also have the ability to isolate workloads and offer different levels of service by using different controller technologies, storage tiers, and QoS policies.

3. Deploy Flash in a Way That Makes Sense for Your Business

Flash storage has emerged as a required technology for businesses. Companies use flash to address application performance requirements and to increase the reliability of traditional disk-based storage infrastructures. However, there is no one-size-fits-all flash solution.

NetApp ONTAP flash storage systems provide multiple approaches to implementing flash that can be shaped around your unique requirements and tailored to your individual goals. Plus, ONTAP uniquely enables both all-flash and hybrid flash systems to be clustered together. As your requirements grow, you can move workloads from high-performance storage to high-capacity storage without disrupting applications by using the same management infrastructure.

For those who want the best of all worlds—low-latency, high-capacity flash storage in a small space—the latest ONTAP all-flash FAS systems let you take advantage of 15TB high-capacity SSDs. When you combine 15TB SSDs with ONTAP storage efficiencies, you can store over one petabyte of effective data capacity in a single 2U shelf.

4. Eliminate Disruptive Downtime

The nondisruptive operational capabilities of ONTAP make your storage environment much more flexible and enable you to eliminate much of your planned and unplanned downtime.

All ONTAP clusters are designed to be fully resilient. By making it possible to perform maintenance as it is needed—rather than deferring it to scarce planned downtime windows—ONTAP further reduces the risk of unplanned downtime.

ONTAP enables you to perform critical tasks without interrupting your business. You can dynamically assign, promote, and retire storage resources to improve service levels over the lifecycle of an application. Plus, storage controllers and disk shelves can be replaced without disruption.

You can also move applications from disk to flash to cloud, without interruption, when data movement is required to achieve management objectives. This can be, for example, as an application transitions from development to production or to adjust service levels.

> *"Using NetApp OnCommand Performance Manager to trend performance over time helps us proactively gauge behavior and adjust, such as optimizing a database configuration tied to a student application."*
>
> Ken Richmond, Microsoft Windows Administrator
> Seminole County Public Schools

5. **Have a Single, Shared Infrastructure**

Businesses often work with stretched IT resources to deal with ongoing storage administration and maintenance events, such as adding new users, balancing workloads, and performing system upgrades. These tasks tend to take up a significant portion of an IT department's time that could be used for more productive projects. Having a clustered architecture that allows faster, nondisruptive automated management makes it much easier to manage storage.

This management is provided by NetApp OnCommand® software, a suite of industry-leading software products that unleash the power of ONTAP to help maximize system utilization, meet storage SLAs, minimize risks, and boost performance. The OnCommand portfolio's intuitive graphical user interfaces, automation, and integration simplify data management of your on-premises and hybrid cloud environments.

6. Add Capacity on the Fly Without Reconfiguring Applications

As IT operations become more and more critical to business, downtime cannot be tolerated. Downtime causes lost business, poor customer satisfaction, and competitive weakness. Nondisruptive operations are fundamental to ONTAP and provide the means for the storage infrastructure to remain up and serving data during hardware and software maintenance and refresh operations. With ONTAP, you can refresh your hardware and software without losing access to your data.

By having several nodes in a scale-out storage solution, you can add capacity to one node without reconfiguring applications. The fluid nature of the ONTAP scale-out storage architecture means that when you approach the limit of your current configuration, you can nondisruptively update your existing controllers to a more capable model with data in place. Or you add another pair of nodes to your cluster.

7. Simplify Complex Tasks

Technical staffs often have dual roles: maintaining existing resources as well as adding new resources for product development. Similarly, many IT generalists tend to wear many hats. This fact makes it even more important for the underlying storage to be fast to configure and easy to use—whether the user is a storage administrator, a database administrator, or someone from the virtualization team. Storage that is easy to use allows companies to leverage their technical talent in ways that directly affect products and revenues.

With preconfigured templates and settings available out of the box, ONTAP lets you get your new all-flash FAS storage system up and serving data in as little as 10 minutes. Leveraging NetApp and application vendor best practices, ONTAP provisioning templates make storage setup a snap for common applications. These applications include Oracle, SAP, Microsoft SQL Server, and virtual server or virtual desktop environments running on either SAN or NAS.

"With NetApp, we get standardization, ease of management, and tight integration with VMware. It all adds up to investment protection, as well as the ability to meet DR and legal requirements. NetApp is more than just a vendor. We see them as a trusted business partner and ally who helps us operate more efficiently and support sustained growth."

Cenk Niksarli, Head of IT Infrastructure Management and Operations Department, Halkbank

8. Maximize Investment Protection

ONTAP is built on the premise that you will get more efficiency out of your storage than you ever imagined. To further protect your investment in NetApp all-flash FAS storage, we even guarantee a 4:1 reduction in capacity over that of traditional HDD-based systems. This guarantee is a direct result of NetApp's leading storage efficiencies, which include inline deduplication, data compression, and data compaction.

But that's not the only way you maximize your investment in NetApp flash storage. Because ONTAP was designed with the industry's leading operating system at its core, ONTAP was also designed to

flexibly adapt and grow in various directions to meet your current and future needs. You can grow ONTAP storage clusters with a combination of FAS (hybrid flash) and AFF (all-flash FAS) storage controllers. Clusters can combine the latest hardware with older hardware because you can mix different generations of hardware within the same cluster.

ONTAP even helps you grow beyond the physical confines of your storage hardware. You can virtualize third-party storage with NetApp FlexArray® virtualization. For remote offices, you can use ONTAP Select to deploy powerful NetApp enterprise data management features on your choice of commodity server and hypervisor

9. Get Cloud Ready

When opting to take advantage of the cloud, it is important for businesses to have a choice in how they deploy their services. Achieving the flexibility and agility of a cloud environment while still having control of your data is a challenging task. The cloud is now becoming an extension of the data center, so why not use the same enterprise data fabric that you use in your data center when you tie into the cloud?

Deploy your system on premises or integrate with public cloud providers to meet ever-changing business expectations. ONTAP enables you to evolve from a private cloud to a hybrid cloud environment without

introducing risk or compromising availability or scalability. As you embrace hybrid and public cloud paradigms, you can use solutions like ONTAP Cloud to extend NetApp storage efficiencies to your storage in hyperscale cloud environments, such as Amazon Web Services.

For example, using NetApp ONTAP Cloud for Amazon Web Services, users can seamlessly extend their enterprise storage beyond the walls of their data center to the cloud. Doing so enables them to better manage data for business continuity, cloud applications, and DevOps. ONTAP Cloud's hybrid approach is a software-only storage service that allows IT, DevOps, and developer teams to use a single solution to easily control data across both on-premises enterprise systems and cloud environments.

NetApp's new ONTAP software and flash-based storage systems give customers a way to bridge new and existing IT architectures as they build and evolve their hybrid cloud.

Learn more about NetApp all-flash FAS products and the FlashAdvantage 3-4-5 program.

Find out why NetApp is named a Leader in the 2016 Gartner Magic Quadrant for Solid-State Arrays. Download the report.

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