



NetApp®

Top Reasons Why Scale Out Storage Is a Smart Choice for Growing Businesses

Why It Matters

With customers demanding higher service levels, applications always need to be available. But with its IT department struggling to implement provisioning requirements that are becoming more challenging, how is a smaller business supposed to keep up? If you're looking to make the best use of your limited IT budget and get the most out of your personnel, which solution do you implement?

Scale-out storage may be the right answer for you. It is becoming more affordable and more accessible. Could it be the answer to your storage and data management challenges?

Benefits of Scale Out Storage

Clustered storage uses two or more storage controllers working together to increase performance, capacity, or reliability. Clustering distributes workloads across storage controllers, manages the transfer of workloads between storage controllers, and provides access to all files, regardless of their physical location.

Because everything can be managed as a single flexible pool, downtime is reduced, administration is simplified, and additional capacity is available where and when you need it. But not all clustered solutions are created equal. That's why you should look into the NetApp® solution: FAS systems running the NetApp clustered Data ONTAP® 8.3 operating system.

The NetApp Solution

The NetApp Data ONTAP 8.3 storage operating system offers a unified scale-out architecture that scales and adapts to your changing needs, reducing risk and cost on the premises or in the cloud. Clustered Data ONTAP is designed to eliminate downtime, allowing you to service your infrastructure—even during regular business hours—without disrupting access to user data and applications.

You can start with a single cluster node or 2 nodes and seamlessly expand your cluster up to 24 nodes as your business needs grow.

Let's take a look at the top reasons to move to a more agile clustered NetApp Data ONTAP environment.



1. Increase Agility Across Your IT Infrastructure

How well mid-sized businesses respond to growth can make or break their future. Investing in the right IT infrastructure becomes critical to keeping up with the emerging and unexpected requirements of a growing company.

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

The inherent capability of a NetApp solution to rapidly provision resources and enable same-day on-boarding of new users increases productivity, improves product development, and speeds time to revenue. With clustered Data ONTAP, you can rebalance capacity and workloads as needed. You can improve service levels by redeploying workloads dynamically and you can avoid hot spots by moving volumes to less active disk aggregates or by spreading workloads across multiple controllers. Each dataset gets the right technology to meet your performance and cost targets.

2. Easily Scale and Adapt Your Storage to the Size of Your Business

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

NetApp supports the broadest set of storage workloads and use cases for both SAN and NAS from a single unified and secure scale-out platform. This 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 hard disk drives (HDDs), high-performance HDDs, or low-latency SSDs, or scale out by adding additional storage controllers to a cluster. Most scale-out storage solutions provide a single large repository. Clustered Data ONTAP takes a different approach that gives you more flexibility and greater control. NetApp Infinite Volume lets you create large, flexible, and easy-to-manage 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. In addition, you can span multiple controllers for nearly limitless scalability.

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

Flash has emerged as a critical technology for businesses of all sizes to address application performance requirements and to increase the reliability of lower-cost storage infrastructure. However, there is no one-size-fits-all flash solution.

NetApp clustered Data ONTAP provides multiple approaches to implementing flash that can be shaped around your unique requirements and tailored to your individual goals. Clustered Data ONTAP is the only scale-out product in the market today that allows all-flash arrays, hybrid arrays, and traditional storage systems in the same cluster. As your requirements grow, you can move workloads from high-performance systems to low-performance systems without disrupting applications and using the same management infrastructure.

In these systems, hot data is automatically cached in flash to accelerate application performance. You achieve optimal performance with little or no tuning, no time-consuming data migrations, and no ongoing data prioritization and management.

4. Eliminate Planned and Unplanned Downtime

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

All clustered Data ONTAP configurations are designed to be fully resilient to component and software failures. You can start small with a single-node cluster (with slight disruption) or enable no disruption with a multinode cluster. By making it possible to perform maintenance as it's needed—rather than deferring it to rare planned downtime windows—clustered Data ONTAP further reduces the risk of unplanned downtime.

NetApp clustered Data ONTAP allows 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 data between controllers without application interruption when data movement is required to achieve management objectives—for example, as an application transitions from development to production, or to adjust service levels.

5. Consolidate and Share the Same Infrastructure

Smaller and midsized businesses often work with stretched IT resources to deal with ongoing storage administration and maintenance, 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, non-disruptive, automated management makes it much easier to manage IT's storage.

With a properly integrated clustered solution, your business can improve service levels by dynamically redeploying workloads and avoid hot spots by moving volumes to less active disks or spreading workloads across more controllers. Each dataset gets the right technology to meet your performance and cost targets.

With clustered Data ONTAP, you can reduce costs with one of the most comprehensive storage-efficient offerings in the industry. You get innovative NetApp Snapshot® copies, replication and cloning technologies, thin provisioning, inline and post-process data compression, and deduplication. NetApp is the only storage provider delivering proven efficiencies for both SAN and NAS on software-based converged infrastructure and virtualized third-party arrays.

[With clustered Data ONTAP] NetApp has provided a storage solution that we can trust day after day, and that offers great features at the right price. Most importantly, NetApp offers us the scalability and peace of mind to know that our IT infrastructure will enable us to continue to grow.

Dan Morris, Senior Systems Engineer, WhiteWater West Industries

6. Add Capacity on the Fly Without Reconfiguring Applications

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 NetApp scale-out storage architecture means that when you approach the limit of your two-node configuration, you can non-disruptively update your existing controllers to a more capable model with data in place or add a second pair of nodes to your cluster.

7. Simplify Complex Tasks

Technical staff at companies often have dual roles, taking care of both maintenance and product development. Storage that is easy to use allows companies to leverage their technical talent in ways that directly affect products and revenues.

NetApp clustered Data ONTAP 8.3 has a common set of features and procedures that simplifies complex tasks, so your IT staff can focus on solving higher-level problems and your operational efficiency grows as scale increases.

The OS simplifies operations and increases productivity by including automation tools to help reduce setup time, which can be less than 20 minutes from powering-up to serving data. Easy-to-use management tools eliminate redundant tasks with the click of a button. Superior integration with ecosystem partners such as VMware, Microsoft and Cisco can double, or even triple, IT productivity.

The fact that NetApp products are easy to use and that they have substantial potential for automation means that IT administrators spend less time maintaining IT infrastructure and more time developing IT products and services.

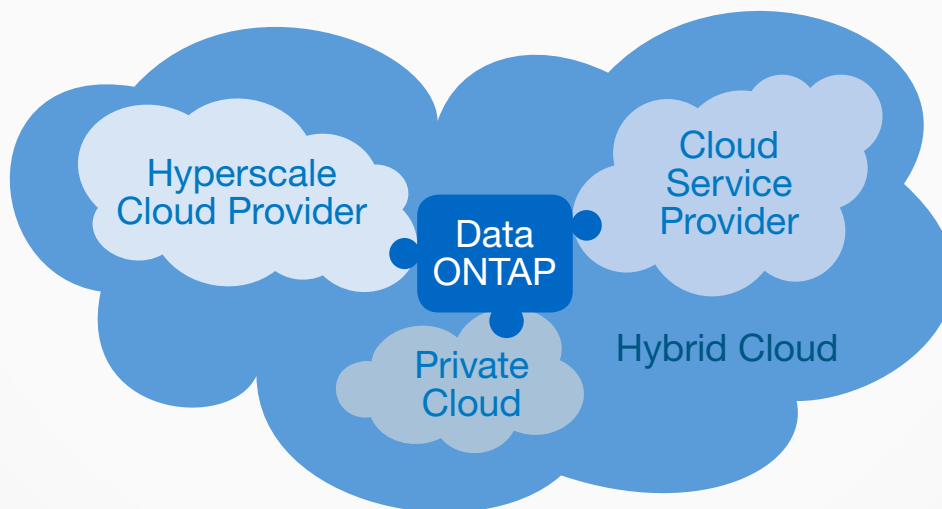
8. Maximize Investment Protection

You can mix storage controllers from various NetApp FAS product lines and virtualize third-party arrays with NetApp FlexArray™ virtualization. You can grow your cluster with the latest hardware and keep older hardware longer because you can mix different generations of hardware in the same cluster. When it's time to retire a storage system, you can simply upgrade the controllers and keep data in place.

9. Get Cloud Ready

When opting to take advantage of the cloud, it is important for customers 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 on the premises when you tie into the cloud?

Deploy your system on the premises or integrate with public cloud providers to meet ever-changing business expectations. Clustered Data ONTAP allows you to evolve from a private cloud to a hybrid cloud environment without introducing risk or compromising availability, storage efficiency, or scalability.



Take the next logical step in virtualized storage. NetApp clustered Data ONTAP is the platform of choice on which your IT can consolidate storage and bring new applications online—without disruption and while actually reducing the total cost of ownership for IT.

© 2014 NetApp, Inc. All rights reserved. No portions of this document may be reproduced without prior written consent of NetApp, Inc. Specifications are subject to change without notice. NetApp, the NetApp logo, Data ONTAP, FlexArray, and Snapshot are trademarks or registered trademarks of NetApp, Inc. in the United States and/or other countries. All other brands or products are trademarks or registered trademarks of their respective holders and should be treated as such.