



## NetApp — Focused Provider of Simplified Storage Infrastructure

Analyst: Michael Fisch

### Where Are They Now?

Like people, information technology vendors change over time. They grow up, move in new directions, and evolve. From time to time, it is worthwhile to reassess players on the field and ask, “Where are they now? What have they become?” Having a glib and broadly accurate answer to this question is helpful for navigating the complex and dynamic IT industry. **The subject here is the storage vendor Network Appliance (NetApp).**

### NetApp of the Past

There was a day when NetApp was nearly synonymous with NAS appliances – specialized, dedicated file servers with integrated storage. NetApp had developed an optimized file system (*WAFL*) and operating system (*Data ONTAP*) and was making hay as a fast-growing NAS pioneer and leader. At that time, there was an ideological debate about NAS (file storage) versus SAN (block storage), the two main networked storage technologies. Some industry participants and pundits portrayed NAS and SAN as rivals in a zero-sum competition, in which there eventually would be a distinct winner and loser. However, pragmatism and moderation have since carried the day. Most now view them as complementary technologies, flip sides of the same coin. Though there is some overlap, NAS and SAN serve different but equally important roles in enterprise storage and in managing its cost and complexity.

**NetApp’s response to this *detente* was to support both NAS and SAN. In their words, it developed *unified storage*.** NetApp introduced *fabric-attached storage* (FAS) platforms that simultaneously support NAS over IP and SAN over Fibre Channel and IP (iSCSI). This means several things that are important to enterprise customers. They can meet a broad spectrum of requirements with a single platform and architecture, which simplifies management and is more cost-effective than multiple platforms. They can make better use of storage assets by pooling NAS and SAN in the same platform. They also retain the flexibility to add capacity for file or block storage as requirements change, which has value in a world of fast and unpredictable data growth.

NetApp has also built up its product line in other ways:

- **Data management software** – NetApp has a raft of software options for protecting and managing data and storage assets.
- **Second-tier online storage** – The *NearStore* platform as well as the *FAS3000* series’ support for ATA drives offers a low-cost target for backup to disk, archiving, and

### IN THIS ISSUE

➤ <b>Where Are They Now?</b> .....	<b>1</b>
➤ <b>NetApp of the Past</b> .....	<b>1</b>
➤ <b>NetApp of the Present</b> .....	<b>2</b>
➤ <b>NetApp of the (Near) Future</b> .....	<b>2</b>
➤ <b>Conclusion</b> .....	<b>2</b>

replication. RAID-DP (double parity) increases the robustness of ATA RAID groups without the expense of mirroring.

- **External virtualization** – The *V-series* platform inserts a virtualization and data management layer in a tiered, heterogeneous storage.
- **Internal virtualization** – The *Data ONTAP 7G* operating system virtualizes RAID groups within NetApp platforms for easier management and better performance and capacity utilization (*FlexVol* and *FlexClone*).
- **Proxy appliances** – *NetCache* appliances deliver content more quickly and securely to remote sites.

## NetApp of the Present

Today, NetApp is a provider of **simplified storage infrastructure, reflecting greater product breadth and depth than in the NAS appliance era (although it still sells a lot of them)**. It is simplified because of the way NetApp engineered it, and it is infrastructure because it delivers solutions broad enough to meet most or all of an enterprise's storage requirements.

The term *infrastructure* refers to a core or foundation upon which day-to-day activities and processes build. For instance, the infrastructure of a city includes roads, bridges, buildings, transit systems, airports, and so forth. These facilitate important daily activities like transportation, commerce, and government. They must be fully in place and integrated for these activities to occur. An infrastructure with roads but no buildings would be insufficient. In a similar way, a complete storage infrastructure enables IT applications and business operations by meeting a full set of requirements.

Today, NetApp's product line is broad enough to be considered infrastructure. The primary and secondary storage platforms and data protection and management software can form full storage solutions. This is attractive to enterprises that prefer a one-stop shop over the time, expense, and risk of a piecemeal approach to building and integrating infrastructure.

Additionally, storage infrastructure is inherently complex. It involves many different, heterogeneous, even distributed components connecting and working together. Simplicity is not its natural state, and if it is to be, it must be engineered.

In NetApp's case, it uses a single architecture for its storage line (WAFL and Data ONTAP), virtualization, unified NAS and SAN support, and common data management software to create simplicity. The business benefits of simplicity are easier management, fewer chances for operator errors, and reduced operating costs.

## NetApp of the (Near) Future

If there is something missing from NetApp's current storage product line, it is scalability at the high end. Its largest primary storage platform, the FAS980, scales to 100 TB raw. This is quite large, though not in the league of high-end, monolithic arrays. Enterprises with the highest requirements sometimes prefer single systems with exceptional scalability.

NetApp is taking a different approach to meet this need. Instead of building a bigger box, it will build very large systems with modular building blocks. NetApp will release - in the near future - the first integrated version of WAFL and *SpinFS*, a clustered file system it obtained from its Spinnaker acquisition. It will allow multiple NetApp storage platforms to appear as one - as a single, virtual system, which it refers to as a *storage grid*. Enterprise customers will be able to scale performance and capacity by adding platforms to the cluster. This offers an incremental, pay-as-you-go approach to scaling storage over time with single-system manageability.

## Conclusion

**So, what is NetApp now, and for the foreseeable future? NetApp is a focused provider of simplified and scalable storage infrastructure.**



### ***About The Clipper Group, Inc.***

***The Clipper Group, Inc.***, is an independent consulting firm specializing in acquisition decisions and strategic advice regarding complex, enterprise-class information technologies. Our team of industry professionals averages more than 25 years of real-world experience. A team of staff consultants augments our capabilities, with significant experience across a broad spectrum of applications and environments.

- ***The Clipper Group can be reached at 781-235-0085 and found on the web at [www.clipper.com](http://www.clipper.com).***

### ***About the Author***

***Michael Fisch*** is Director of Storage and Networking for The Clipper Group. He brings over ten years of experience in the computer industry working in sales, market analysis and positioning, and engineering. Mr. Fisch worked at EMC Corporation as a marketing program manager focused on service providers and as a competitive market analyst. Before that, he worked in international channel development, manufacturing, and technical support at Extended Systems, Inc. Mr. Fisch earned an MBA from Babson College and a Bachelor's degree in electrical engineering from the University of Idaho.

- ***Reach Michael Fisch via e-mail at [mike.fisch@clipper.com](mailto:mike.fisch@clipper.com) or at 781-235-0085 Ext. 211. (Please dial "211" when you hear the automated attendant.)***

### ***Regarding Trademarks and Service Marks***

***The Clipper Group Navigator, The Clipper Group Explorer, The Clipper Group Observer, The Clipper Group Captain's Log, The Clipper Group Voyager, and "clipper.com"*** are trademarks of The Clipper Group, Inc., and the clipper ship drawings, "*Navigating Information Technology Horizons*", and "*teraproductivity*" are service marks of The Clipper Group, Inc. The Clipper Group, Inc., reserves all rights regarding its trademarks and service marks. All other trademarks, etc., belong to their respective owners.

### ***Disclosure***

Officers and/or employees of The Clipper Group may own as individuals, directly or indirectly, shares in one or more companies discussed in this bulletin. Company policy prohibits any officer or employee from holding more than one percent of the outstanding shares of any company covered by The Clipper Group. The Clipper Group, Inc., has no such equity holdings.

### ***Regarding the Information in this Issue***

The Clipper Group believes the information included in this report to be accurate. Data has been received from a variety of sources, which we believe to be reliable, including manufacturers, distributors, or users of the products discussed herein. The Clipper Group, Inc., cannot be held responsible for any consequential damages resulting from the application of information or opinions contained in this report.