

VENDOR PROFILE

Cleversafe Delivers an Efficient and Secure Storage Solution

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IDC OPINION

The amount of data being created and stored in the enterprise continues to grow even while overall IT budgets are shrinking. The need to house newly created data as well as data that represents value to the organization, even if it is not frequently accessed, is driving organizations to seek more efficient and secure ways to store information. Solutions that can address as many of the following requirements as possible are well positioned to attract attention and gain traction in the market. The key demands for storage are:

- Reduce the cost of storage through higher utilization of existing and new storage resources
 - Manage information more effectively and efficiently to reduce both the liability of information and the storage capacity required to support information
 - Reduce operational complexity and improve its efficiency by reducing management overhead and datacenter footprint
 - Ensure data key to business differentiation and competitiveness is secure over time
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IN THIS VENDOR PROFILE

This IDC Vendor Profile profiles Cleversafe, a developer of dispersed storage technology for large storage repositories and clouds.

SITUATION OVERVIEW

Company Overview

Cleversafe was founded in 2004 with private investments and is headquartered in Chicago, Illinois. The key concepts built into its technology are security of data, data availability, and storage efficiency, with the option to deploy across geographies or within a single datacenter.

In 2007, Cleversafe released its first solution, dsNet storage, for block storage. The overall system allows the data to be dispersed across geographies or systems within a datacenter. A unique algorithm is used to divide data into chunks or slices. Each

slice is given a set of values. When all the slices are dispersed, they create a secure, reliable, and efficient storage mechanism for the data. As a default, a typical file would be divided into 16 slices, and each slice can live in a different location. To read the file, the user only need to access 10 of the 16 slices. In detail:

- ☒ From a security perspective, someone with access to less than 10 slices would not be able to reconstruct the data, keeping the content safe.
- ☒ From an availability perspective, the dispersal of slices provides a higher level of protection against drive failure and lower capacity overhead than traditional RAID while eliminating the need for costly replication.
- ☒ From an efficiency perspective, the capacity overhead required to deliver a higher level of redundancy for the data is significantly lower, which results in operational cost savings as well as lower capital expenditures.

The dsNet system was designed as a second-tier storage solution addressing the need to store data for an extended period of time. The architecture makes it simple to upgrade the hardware without having to do a major migration or format modification. The persistence of the environment lends itself to being the platform for large content repositories where information can be localized based on access patterns, disaster recovery needs, and security requirements. The dsNet system becomes a cost-effective solution at about 50TB and scales to theoretical infinity.

dsNet storage solution consists of three main appliance components: Accesser 2000, Slicestor 2000, and dsNet Manager 2000.

Slicestor 2000 is the storage system that contains four 1TB disk drives and is the repository for data. Slicestor 2000 can be deployed in a rack within a datacenter or in multiple datacenters across geographies. Slices, or unrecognizable data chunks, created from a file with characteristics and attributes that only a dsNet system can translate are placed on different Slicestor 2000 appliances. When data is being read, at a minimum, 10 slices must be accessed to reconstruct the file; by themselves, the slices have no value.

Accesser 2000 is the gateway appliance that maintains location of slices and serves as the protocol translator. The data comes in over standard block protocols and is translated into the dispersal protocol with which it communicates with the Slicestor appliances.

dsNet Manager 2000 is an appliance that is responsible for the configuration, permissions, and overall management of the system.

On August 15, 2009, Cleversafe announced the availability of its dsNet object storage. This solution will be based on the same dispersal principles and require the three appliances to run; object storage can share the dsNet system with block storage, requiring only the Slicestor to be separate. The object store supports embedded Java, HTTP, REST, and simple object protocols.

Company Strategy

In 2009, Cleversafe has made a commitment to getting key accounts up and running. The organization is focused on proving the concept's applicability and functionality. Starting in 2010, Cleversafe will expand its market focus on organizations building service-oriented infrastructures. These organizations may be service providers, such as hosting and cloud companies, as well as enterprises seeking to gain economies of scale and scope. The key target markets will include media and entertainment, video surveillance, biotech, telco, healthcare, and government.

The go-to-market strategy will be based on direct sales and working with partners such as integrators focused on designing and implementing multitenancy environments for service providers and enterprises. Though the value of the technology can best be realized at 50TB or above, organizations with stringent security requirements may opt to implement dsNet at lower capacities.

FUTURE OUTLOOK

The storage market continues to evolve with the focus on storing an ever-increasing amount of data and doing it effectively and efficiently. Solutions that can intelligently address these emerging trends will be well positioned to form right partnerships and gain market adoption. Cleversafe's dsNet for block and object storage offers a differentiated approach to storing content securely and efficiently for an extended period of time. The challenge will be articulating the message that resonates with enterprises, establishing loyal and capable sales channels, and packaging the solution in a way that is easy to deploy within the existing and new infrastructures.

ESSENTIAL GUIDANCE

Advice for Cleversafe

Cleversafe has designed and brought to market a technology with unique characteristics that deliver value both in security and in efficiency. With the increasing focus on efficiency, especially by enterprises, there are a number of opportunities for Cleversafe to establish technology partnerships and valuable roads to market:

- ☒ Partnership with file-based storage solution providers to use the dispersal storage mechanism as a secondary or tertiary storage pool for less active or sensitive data could open the door to enterprise clients with multiple locations that are seeking a secure and efficient way to store a lot of data for a long time.
- ☒ Developing an effective road to market will be critical to establish a significant market presence. The channel can include technology partners such as the file-based storage vendors but also a few VARs that have the expertise and understanding of how this technology can be positioned.
- ☒ The dispersal protocol should be leveraged in a special packaging that highlights its ability to deliver high levels of data reliability and storage efficiency. Don't close the door on potentially porting the software to more standard platforms that

can be utilized by storage vendors with their own hardware. This might not be a short-term objective but an option that should be considered in the right circumstances.

- ☒ When ready, target educational programs to markets that have data sensitivity such as biotechnology and pharmaceutical companies, local government agencies, and the legal industry and cost-sensitive markets such as CDN, healthcare, and storage-as-a-service providers.
- ☒ There is value in both geographic dispersal and dispersal within the datacenter; identify use cases for both since both will be relevant to enterprise clients in particular.

LEARN MORE

Related Research

- ☒ *NetApp Industry Analyst Day 2009 — A Focus on Storage Efficiency* (IDC #219101, June 2009)
- ☒ *Building the Next-Generation Datacenter: Focus on Cloud Storage* (IDC #217806, April 2009)
- ☒ *Worldwide Storage Software 2009–2013 Forecast: Quest for Efficiency Driving Investments in Storage Software* (IDC #217529, March 2009)
- ☒ *Achieving Storage Efficiency Through Storage Tiers* (IDC #217734, March 2009)

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