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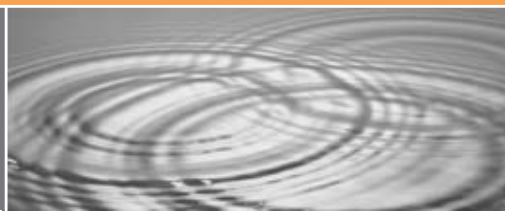
SOLUTIONS DATASHEET

Better Business Continuity with VMware Virtual Infrastructure and Data Domain



Business Continuity Challenges

Implementing plans to ensure business continuity for key IT services is a requirement for organizations today. Downtime of important applications is a costly proposition and extended downtime can even be fatal—industry research finds that a significant number of companies that experience extended interruption to IT services soon go out of business.

While most organizations recognize the importance of business continuity, their ability to provide high availability and disaster recovery for key applications is often constrained by the following challenges:

- **High costs.** Many business continuity solutions require significant investment in additional hardware, software and services. Disaster recovery plans in particular often require duplicating data center infrastructure, resulting in a proliferation of costly, underutilized servers.
- **Failure to meet recovery time and availability goals**. Due to the cost and complexity of business continuity solutions, organizations are often forced to compromise on solutions that are unlikely to meet goals for availability and recovery time objectives.
- **Overly complex and unreliable solutions.** Requiring significant equipment and personnel resources, the complexity of specialized solutions make them difficult to maintain and harder to ensure that sufficient staff are trained and available when needed.

Higher Availability with VMware Virtual Infrastructure

VMware's groundbreaking VMotion technology allows IT administrators to move running virtual machines (software containers that hold a complete operating system and applications) from one physical server to another without downtime. This capability makes it possible to conduct zero-downtime hardware maintenance by simply using VMotion to move running applications to other physical servers as needed.

Support for redundant network and storage interface cards is built into VMware® ESX Server, allowing network and storage interface cards to be shared by multiple virtual machines on a server.

Better Disaster Recovery with Virtual Infrastructure

VMware virtual machines are hardware-independent and thus any physical server can serve as a recovery target for any virtual machine. As a result organizations can significantly reduce the cost of hardware for disaster recovery by repurposing underutilized existing servers for recovery targets and disaster recovery testing.

With VMware virtual infrastructure, complex multi-step procedures using specialized software for bare-metal recovery and operating system recovery can be simplified to single-step file recovery. Because virtual machines are completely encapsulated in a small number of files, they can be restored to any hardware. This encapsulation property also makes it possible to use third-party replication software to replicate entire virtual machines to a recovery site, reducing recovery time to just a few hours.

Virtual infrastructure enables a more reliable disaster recovery plan. Because it simplifies disaster recovery processes, the ability to meet time-to-recovery targets is improved, testing of disaster recovery plans is simpler, and training personnel in disaster recovery procedures is easier.

Benefits of Business Continuity Solutions with Virtual Infrastructure

Customers who have used VMware virtual infrastructure to improve their business continuity plans have realized benefits including the following:

- **Reduced downtime.** Customers can eliminate much of their planned downtime with a virtual infrastructure solution. They can also prevent and reduce unplanned downtime, including dramatic reductions in time to recovery for disaster scenarios.
- **Lower costs.** Virtual infrastructure makes it possible for companies to implement better business continuity at a lower cost by slashing the need for additional hardware and specialized software.
- **Simplified processes**. Virtual infrastructure removes the complexity of maintaining duplicate physical systems for disaster recovery. It also eliminates and streamlines much of the recovery process.

Learn More

To learn more about VMware solutions and products, visit our Web site at http://www.vmware.com or contact us at us at 1-877-4VMWARE.

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Key Highlights
Data Domain
www.datadomain.com

Partner Overview
Enterprise Protection Storage systems optimized for disk backup and network-based disaster recovery (DR).

Key Business Needs
Data Domain products provide a consolidated backup/DR solution offering cost effective long-term retention for combined .vmdk and file/application level backups, short backup windows, multiple backup copies of .vmdk files, and high bandwidth replication.

Key Business Benefits
Minimize network bandwidth – enable network efficient electronic vaulting for DR.

Massive storage reduction – minimizing storage space by de-duplicating highly redundant copies of very similar or identical block data. Multiple snapshots of the same system can be sent throughout the day or week, while taking up minimal additional space.

Speed – send system images to proxy servers ASAP to be mounted and backed up as fast as possible.

Business Results
- 20x cost savings
- 99% reduction in bandwidth
- Decrease in human resources and administration
- Faster data recovery
- No lost data

VMware and Data Domain
Data Domain and VMware solutions together can result in:
- Up to 40x data reduction of .vmdk files
- 99% Bandwidth reduction for efficient replication
- Simple integration with the latest VMware backup processes
- Ensured recoverability with data invulnerability

Products
The DDX Series, DD4xx and DD5xx series

Enterprise Protection Storage Systems for Disk Backup and Network-Based Disaster Recovery

Consolidate Backup and Disaster Recovery for your VMware Environment

Industry Overview

The importance of disk-based backup and rapid recovery is a critical data protection strategy needed across the enterprise. Network-based electronic vaulting is preferred over using tape for disaster recovery. However, without a massive reduction in data, these options are not practical. Disk storage and replication bandwidth are too expensive.

Data Domain targets VMware Infrastructure 3 customers who are experiencing a lack of consolidated backup/disaster recovery solutions for combined .vmdk and file/application level backups; long backup times required to backup large .vmdk files; exorbitant storage costs to retain multiple backup copies of .vmdk files; and/or high replication costs.

Understanding the joint benefits is important for storage and/or backup administrators, business continuity and disaster recovery administrators, and CIOs.

Solution Overview

Data Domain products enhance customer's business by providing:

- Massive Data Retention – Retain data at the cost of tape, save multiple copies of .vmdk and traditional backups and store them for months for less than $0.35/GB.
- Efficient Replication – Eliminate tape, simplify/validate disaster recovery (replicate daily .vmdk files for entire environments), and save money on bandwidth.
- Data Invulnerability – Restore backups and eliminate tape failures.
- Seamless Integration – Maintain native support in VMware for disk-based .vmdk backups, VMware Infrastructure 3 consolidated backups (virtual lan-less backup to ddr), and provide support for traditional backup software requiring no changes to existing network infrastructure or backup policies.

Data Domain's Global Compression high performance de-duplication and local compression technology dramatically reduces the volume of .vmdk backup data to be stored by up to 40x. Cutting network bandwidth requirements up to 99%, the Data Domain solution enables offsite vaulting for disaster recovery across the WAN – eliminating the need to physically transport tape backups to a disaster recovery location. This data reduction lowers the cost of operations by reducing storage and network bandwidth costs.

By replacing tape-based backup systems, Data Domain products dramatically improve the speed and efficiency of disaster recovery and eliminates tape, moving physical storage and unnecessary delays. Data can be recovered locally from the on-site Data Domain system or over the network from a replica system, instead of waiting for tapes to be delivered, searching the right set of tapes or mounting delays.

With Data Domain's highly efficient, high performance Global Compression, Data Domain Enterprise Protection Storage systems deliver months of data retention capacity at less than $0.35/GB; lower than the cost of tape. This allows enterprises to use Data Domain systems for day-to-day backup and disaster recovery operations.

Data Domain and VMware

- Industry proven de-duplication technology
- Simple to administer bandwidth efficient replication
- Reliable backup and rapid recovery

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