

## StorTrends Solutions for Databases

Data is the life blood of most organizations. Whether the organization is a 20 man shop or a fortune 500 enterprise, chances are the daily workflow of the business is reliant upon its database operations. Regardless of data size, DBA's face a number challenges when deploying and managing databases. With the variety of products in the market today the decision of how to configure, deploy and manage the database can be a rigorous task. The StorTrends data storage product family is able to address the organization's goals, efficiently manage and protect the data while reducing the cost of database deployments and management.

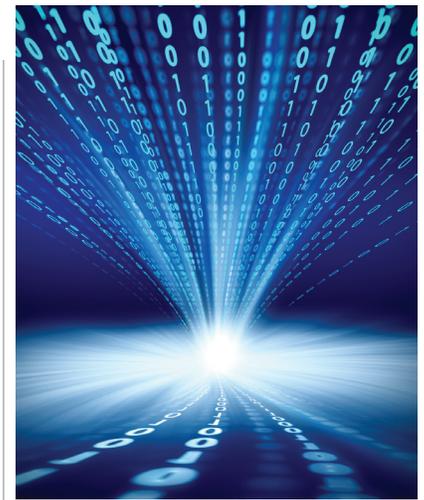
### Database Challenges:

#### Cost (Capex & Opex)

To reduce up front cost of database deployments, StorTrends offers Thin Provisioning, which lays the foundation for simple capacity growth and performance scaling. Additional cost savings are achieved with Auto-Tiering technology by reducing the number of higher performing more expensive disks, such as SSD or SAS, needed or necessary within the array. Auto-Tiering will automatically demote older cold blocks of data down to less expensive disk types and/or RAID sets leaving the more expensive higher performing disks available for active data or hot blocks. This results in the more frequently accessed data to be stored in the highest data tier for faster service to the databases and users. StorTrends also utilizes an elegant Workflow Management feature which will perform data migration during off peak times of operation ensuring optimal performance for your database during peak operating hours. In the past, a company would need 256 spinning disk to provide the IOPS that are available in a single hybrid storage array, like the StorTrends 3500i. This means major savings on rackspace, power and management expenses as compared to spinning disk.

#### Performance

A key part of any database deployment is its performance. With the cost of SSD becoming a more viable piece of a storage array, many vendors are providing SSD options. However, a majority of these storage vendors simply throw SSD disks into their existing array and depend on the SSD performance to handle the IO loads. StorTrends offers a variety of features and tools to not only handle the IO, but also enhance the performance to satisfy the endurance of the load. StorTrends provides the flexibility to add SSD as a cache tier, a data tier or a mixture of both caching and tiering making this the premier hybrid SSD storage array available. Further, with QoS (Quality of Service) policies such as Tiered Residency users can decide how much of a data volume resides in the SSD tier versus on the spinning disk tier within the hybrid array. Having the option to appropriately designate where a particular database resides on the array is paramount to ensuring an efficiently running deployment. This allows



### Key Benefits:

- SSD caching and tiering support for superior performance
- Tiered residency for application aware I/O and auto data tiering
- Application aware snapshots with single line database recovery

*"The StorTrends Team listened to our needs and provided a demo unit for use within our data center, which other storage vendors would not do. We had issues with our primary Dell array and replaced it with the StorTrends unit in production. A task that would take 45 minutes before now only takes 6 minutes with the StorTrends SAN. We have since bought several StorTrends units and they have done nothing short of bending over backwards for us at Charlotte Radiology."*

- Tony Maynard, Systems Admin,  
Charlotte Radiology

the user to finely tune the hybrid SSD storage array for ultimate performance. These technological features combine within StorTrends to allow for blazing read and write performance which traditionally have been a bottleneck for high performance databases.

## Availability

DBA's agree that downtime of a database is not acceptable. In many enterprises even a maintenance window can be difficult to achieve. The StorTrends dual controller model offers upfront redundancy complete with automatic failover and failback for ease of management while keeping the data available (99.999's). The dual controller reduces the amount of precious rackspace in the data center while also decreasing the power and cooling cost. This virtually eliminates downtime for software upgrades, fully automates failover/failback functionality and provides for Active/Active or Active/Passive configurations to meet the reliability and availability requirements. StorTrends also provides application aware snapshots and consistency groups to ensure that the data is available and consistent in the event of a rollback. StorTrends utilizes Redirect on Write (ROW) snapshot technology. This minimizes performance hits during snapshotting and reduces capacity overheads found in many storage arrays in the market today. StorTrends snapshots are also mountable, making data validation simple before rolling back an entire volume or selecting a specific file to recover.

## Redundancy

From onsite data issues to devastating natural disasters, StorTrends is equipped with a feature set that will make data recovery simple and fast. StorTrends is equipped with a very robust set of replication tools allowing replication of data to your off-site repository for disaster recovery or archival. StorTrends is able to replicate between any of the products within the product family with the ability for many-to-one or bidirectional replication for multisite deployments. StorTrends proprietary WDS (Wide Area Data Services) technology provides adaptive compression to reduce compression overhead, data-deduplication and a WAN optimization tool to overcome the latencies that are inherent to TCP/IP over the WAN. Utilizing StorTrends WDS technology allows you to deploy a very cost effective strategy and greatly reduces your backup windows.

"As I researched potential SAN solutions for Cambridge Biomarketing, I kept coming back to StorTrends from AMI. It had the ability to handle capacity needs, the required redundancy in their HA config, a very easy and intuitive GUI, certification with VMware, and JBODS for future expansion. But what sealed the deal was the price – StorTrends was 25 percent less than a similar solution from another vendor."

- Chris Haight, CEO, Preware

"It's not an easy thing to quantify, but part of the reason I chose StorTrends was the attitude and professionalism of their sales staff. The people I worked with were down-to-earth, humble, and true storage technology experts. I never felt like they were selling me. They are just good people - bottom line. It sounds trite, but that matters to me."

- Tim Robinson, IT Coordinator and Systems Admin, University of Maryland

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