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WHITE PAPER

## Find Your Best Alternative to Traditional Tape Backup

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## Find Your Best Alternative to Traditional Tape Backup

### Executive Summary

Every business holds thousands, even millions of bytes of data within its database. But what happens if that information is lost? Is your company prepared? This white paper focuses on the importance of backing up data. It examines alternatives to tape backup and looks at how Hitachi can provide the best solutions at the best price for the growing costs of managing information.

### Introduction

Regardless of what kind of business you own, data is being created and flowing into your company every day. Whether it's a retail store's history of transactions, or a bank's credit information, today's business world relies on computers and storage devices to save every bit of important information. Rows of data storage racks fill an entire room at a large-scale corporation, each working day in and day out to ensure that every piece of data is running smoothly and stored safely. But what happens if the data center crashes, or catches on fire? Companies that rely on large data centers to keep their important information are more than likely prepared with backup storage that holds duplicates of all their files. Yet a data-loss situation can occur at any company, big or small, and the last person you want it to happen to, is you.

The importance of backing up data is often overlooked by companies, and data crashes occur more than you would think. According to Richmond House Group, "20% of small-to-medium businesses will suffer a major disaster, causing loss of critical data every 5 years." To put that into perspective, according to the website Lawcore, "More than 25% of all car drivers were involved in car accidents in a 5-year period." Therefore, the odds of a business suffering a critical data loss are slightly less than a car driver's odds of getting into an accident (see Figure 1). Despite this, why do almost all Americans have insurance for their car, yet they refuse to have "insurance" for their business? Your business is more valuable than any car on the market, and while your vehicle may bring you from point A to point B, your business is what will provide the money to actually fill the tank.

**Figure 1. The odds of a business suffering a critical data loss are slightly less than a car driver's odds of getting into an accident.**



All humans are error-prone and often data crashes occur from a human error rather than a technical malfunction. You just never know when such an error may occur. The only thing you can do is be prepared. How would you feel if your business was destroyed due to one person's error? The consequences don't just stop at that one person. Data

loss affects everyone, including customers and workers, who may find themselves jobless because of one careless mistake. In fact, “93% of companies that lost their data for 10 days or more filed for bankruptcy within one year of the disaster, and 50% filed for bankruptcy immediately.”<sup>1</sup>

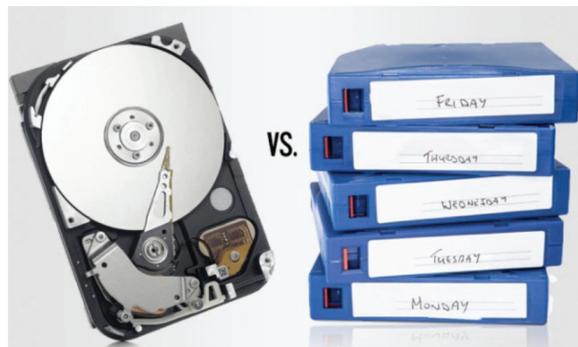
Denise Krane, a professor at Santa Clara University, uses the school’s database to access information every day, and says, “Having the school’s server go down would be very problematic. The transcripts, information about financial aid, and so on would be terrible to lose. I’m not certain how the university would recover all those files for current students and alumni.” If Santa Clara’s database suffered a wipeout, teachers and students alike could lose information, such as grades, financial aid and more.

## Take the Next Step in Technology

Despite all the advances in technology over the past few decades, tape storage continues to be a cost-efficient and popular way to store data. However, as the amount and complexity of data increase, more and more businesses are making the switch to storage systems (see Figure 2). Storage systems are capable of holding large amounts of data within a block of racks, rather than multiple tapes. They also allow for faster processing when a certain file must be located. Rather than having to search through individual tape cartridges for a single file, administrators are able to find a file just as easily as they can store one.

Additionally, today’s storage systems make it easy to incorporate other systems in remote locations. Previously, if a company’s building holding all of its tape were to burn down, there would be no way to recover the lost tapes. With storage replication technologies of today, however, data can easily be transferred to another off-site backup drive for access.

**Figure 2. More and more businesses are making the switch from tape to storage systems.**



## Look at Expenditures

Whether you are a startup or an established company, every business generally looks for key criteria in buying a storage product. They look for a product that will bring the most efficiency, at the most affordable price.

<sup>1</sup> National Archives and Records Administration in Washington

A backup storage system is an investment, and businesses aim to save as much money as they can for as long as they can. This means factoring in both the fixed capital expense (capex), or cost of the equipment, as well as the ongoing operating expenses (opex), such as cooling costs.

Rather than create a physically large storage platform, Hitachi thought, “let’s do more using less.” We implemented a dense structure for the Hitachi Unified Storage (HUS) 100 family systems, which allowed for more room within one platform, without compromising size. The dense structure uses less space, thus requiring less energy and money to keep the systems cool.

A business also wants to look for the product that can offer the best capabilities and efficiency. Even for secondary use as a backup, businesses require something that will be large, fast and work just as well as if it were a primary data center. In our HUS systems, we have implemented new technologies that define being efficient, and will make backing up data lighter on the wallet. With our energy-saving features, we have found ways to decrease energy consumption, while increasing savings (see Figure 3). While other data storage systems constantly run even when not in use, HUS systems are put into idle sleep mode when unused, and are made to quickly start up upon command. Calculations have shown that when HUS 150 runs both at 24 hours and 8 hours (standard for backup), our energy optimization features can save organizations more than 45% in operating and cooling costs. This feature that we offer on all products can benefit all businesses, especially large-scale corporations using a large amount of storage products.

**Figure 3. Hitachi storage decreases energy consumption while increasing savings.**



## The Solution

For midsized businesses looking to find the most secure and powerful solution on the market for backing up data, the Hitachi Unified Storage 100 family is your answer.

HUS 150 is a top-of-the-line storage solution for any organization looking to insure their business. Technology research company Gartner reviewed all of the top companies for disk drives, and stated that “The symmetric active controller architecture with automatic load balancing sets the richly featured HUS platform apart from competing dual-controller midrange disk array systems.”<sup>2</sup>

Ideally, all of the functions and capabilities of HUS 150 make it a great option for businesses looking to safely store their files. Its use as Tier 3 storage allows you to obtain very large spaces of data to store all files (present and future)

<sup>2</sup> “Magic Quadrant for General Purpose Disk Arrays - 2013,” Gartner, Inc., <http://www.gartner.com/technology/reprints.do?id=1-1EL3WXN&ct=130321&st=sb>

at a very feasible price. Organizations using HUS 150 as a Tier 3 storage can save nearly 80% per dollar per gigabyte compared to enterprise storage systems.

As the strongest and largest HUS product in the product line, HUS 150 is ideal for any midsized business. HUS 150 offers roughly 3.6PB worth of space in this Tier 3 configuration. It also offers great scalability, and the option to incorporate additional disk drives with ease, allowing it to meet the demands of a growing business.

Dr. Varanyu Suchivoaphanpong of the Islamic Bank of Thailand applauded the Hitachi Unified Storage family. He states, "As all of our data is vital and cannot be compromised, effective storage is required to enable immediate data sharing and tracking; data backup and retrieval systems must be available once the problem rises. Hitachi Unified Storage can serve all of our requirements with high performance and cost-efficiency."

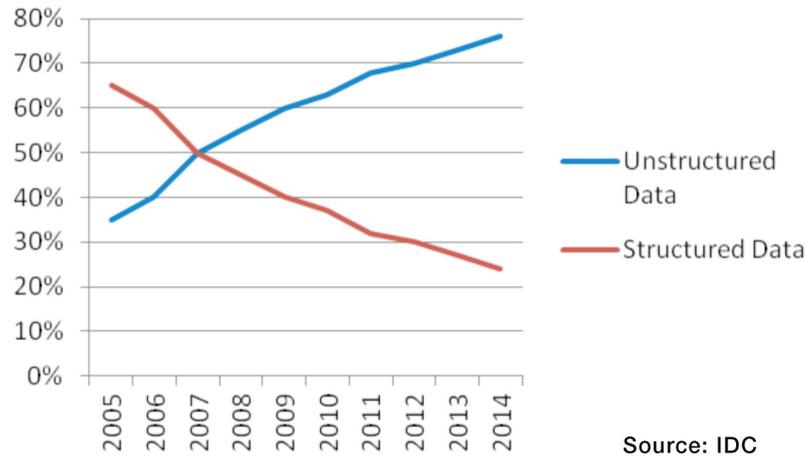
The product ensures reliability, with a 99.999% data availability rate, and no single point of failure. This makes it easy to not only move files into a safer place, but also consolidate the files by eliminating any redundant duplicates, leaving more room for future data.

HUS 150 operates in an "ecosystem" of various products from various companies. It works with all types of backup software, whether that be Symantec, CommVault or any of the leading backup software companies. This compatibility makes storing and recovering data as easy as possible for businesses, and, at the same time, offers the best features in a backup software, such as deduplication and snapshot.

While virtual tape libraries (VTL) are still a popular method of accessing files, companies such as Symantec and CommVault have developed software that is not only faster, but also capable of performing more tasks to make the most out of your backup. For example, Symantec's OpenStorage plug-in features many additional benefits to assist their NetBackup, such as Replication Director and Auto Image Replication, which allows data to be transferred between multiple domains. In fact, according to Tech Validate, 91% of IT organizations use Symantec's NetBackup as their primary backup software. CommVault also features similar capabilities in its program, Simpana, and has become a popular option for customers as well, with 89% of Simpana users recommending the program to a peer (Tech Validate).

HUS 150 stands out as one of the few storage products on the market to support unified storing between file and block data. Specifically, studies have shown that unstructured data, in the form of documents, spreadsheets or Microsoft® PowerPoint® files are gaining ground on structured data, and will make up the largest portion of disk storage consumption by 2015 (see Figure 4). For someone like Professor Krane, who often works with documents and spreadsheets, HUS will be able to meet all of her needs, and possibly store all of her files for the rest of her teaching career!

Figure 4. Today's organizations are experiencing a sharp increase in unstructured data.



### Conclusion

With over 100 years of experience in the tech industry, the Hitachi has built a reputation for delivering high-quality, reliable and high-performance solutions for any market. We have posted 14 consecutive quarters of yearly growth, and are one of the world's leaders in the development of business changing technologies. A partner to 70% of the Fortune 100 companies, Hitachi Data Systems has proven time after time that its products are driven and crafted with both our customers' and our partners' success in mind.

Over time, we have introduced ground-breaking technology that has helped shape the business world, and we continue to do so with our latest products. While our competitors offer high-quality data storage solutions, we create our storage solutions with the consumer in mind, implementing features that can make protecting your business, small or large, much more efficient. With our unique unified tiering storage platform, diverse functional capabilities, and our resolution to create cost-efficient and environmentally friendly products, we believe that Hitachi Unified Storage 150 serves as a valuable backup system that makes any business a more successful business. To learn more about our products, or find out more about how our products can help you run your business, visit us at [www.HDS.com](http://www.HDS.com), or contact your HDS representative.

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