



Next Generation Backup:

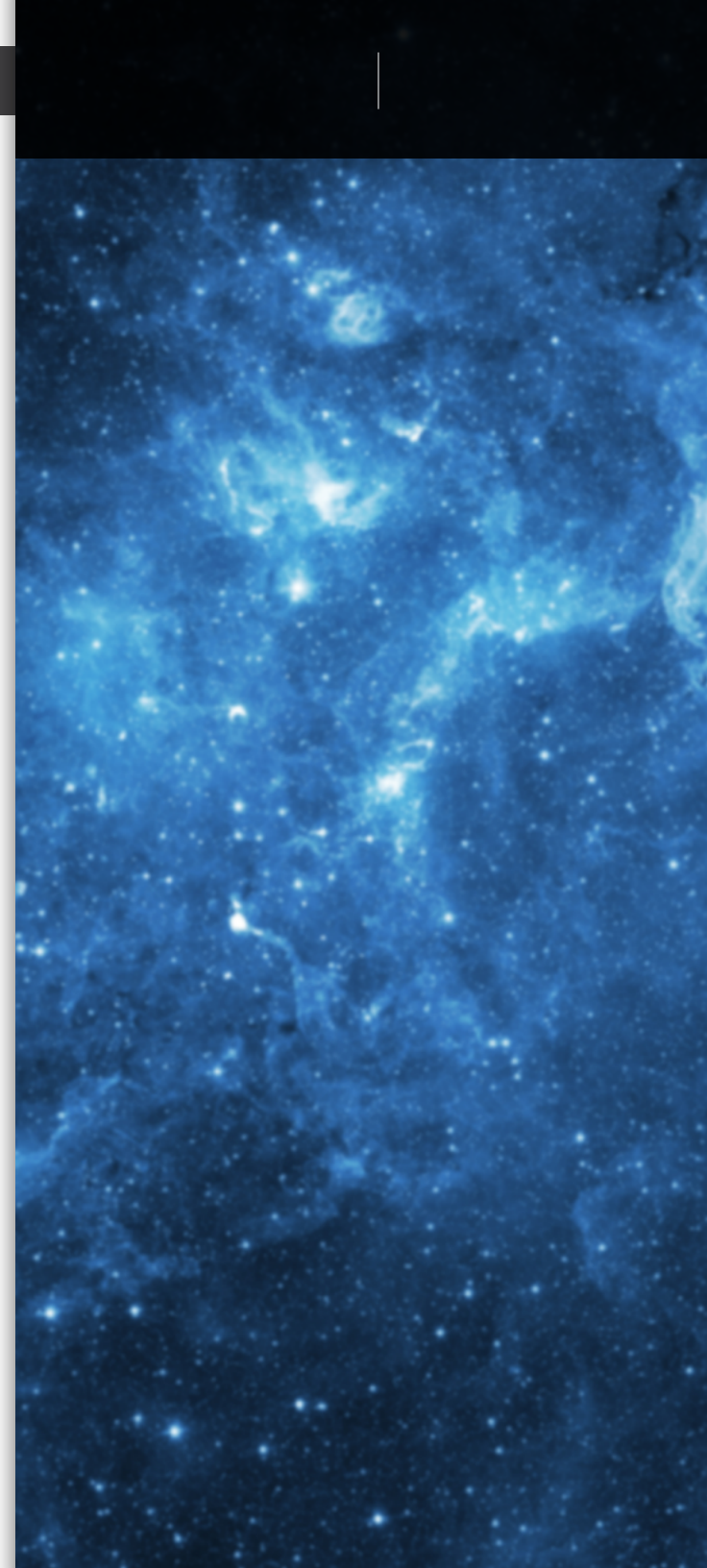
Better ways to deal with
rapid data growth and
aging tape infrastructures

What we see happening today.

The amount of data businesses must cope with on a daily basis is getting larger every year. In fact, data is exploding with a forecasted 44x growth in this decade, while IT budgets are unable to keep pace seeing minimal growth annually. Backup and recovery issues are a growing concern for IT departments because more of their time is being consumed handling longer backup windows. To rectify this, businesses must contemplate making the transition from legacy tape-based infrastructure to newer, more efficient, disk-based backup solutions.

Tape has long been the baseline backup and recovery strategy for organizations. However, as the amount of data organizations must protect continues to grow at an exceptionally fast pace, tape-based backup infrastructures are struggling to keep up with the demand. In fact, tape is rapidly losing market share and being replaced by a better performing, increasingly affordable and time saving option – disk-based Purpose Built Backup Appliances. More businesses are making the transition to disk-based backup because of its inherent advantages over tape.

This eBook is designed to give you a brief overview of the changes that are occurring with backup and recovery strategies. It describes why businesses are transitioning to disk-based backup, the challenges they faced to trigger that transition, and the solutions they have deployed. Finally, we provide some case studies and real-world results to demonstrate the advantages of backup to disk.

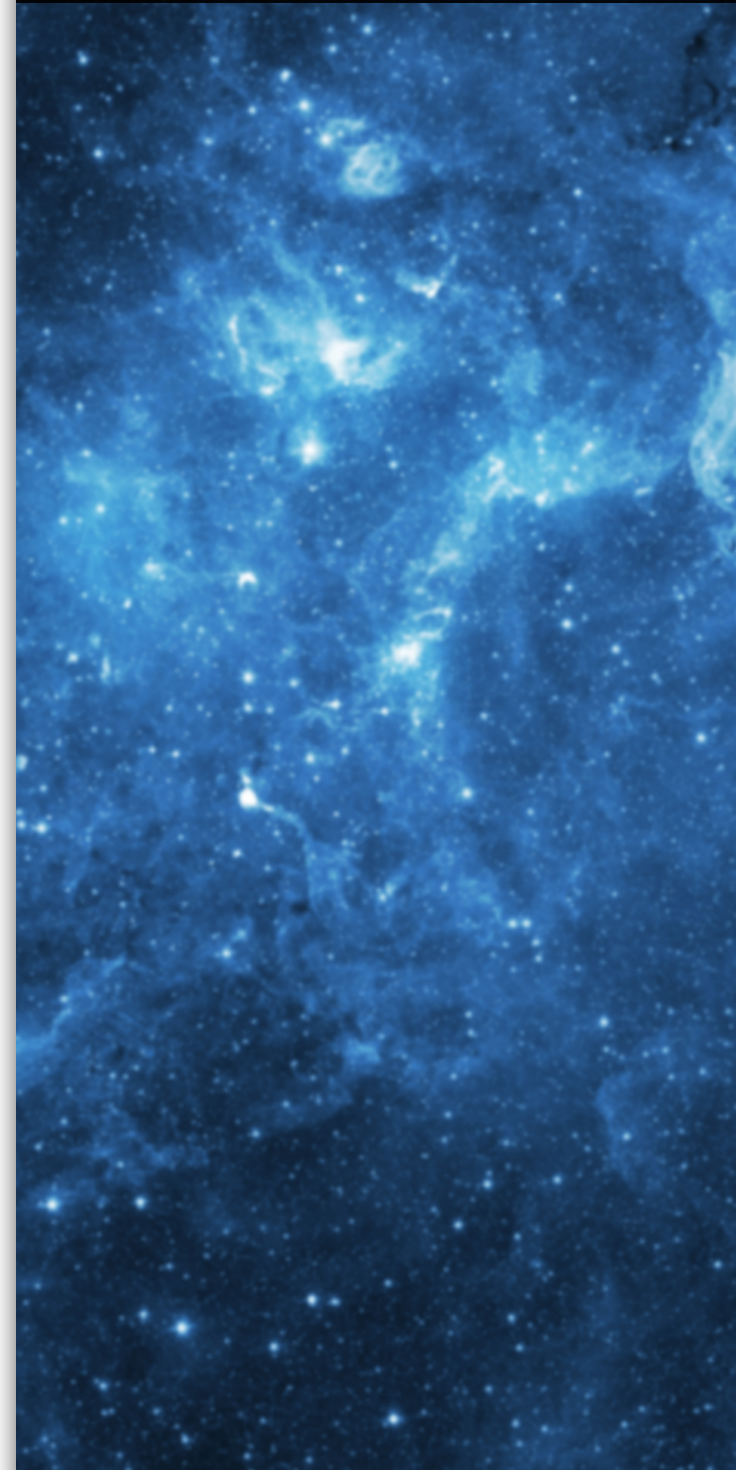


Is this your data center?

Tape has been the standard backup media for decades. Businesses use tape because it is familiar to them and because of its low acquisition cost per tape cartridge. However, IT departments are expected to perform backups faster every year, with increasing amounts of data and almost stagnant annual IT budgets. Adding tape drives and increasing network bandwidth are popular short-term fixes for backup and disaster recovery challenges, but these actions are quickly offset by the growing amount of data backed up each night. These actions also don't address other critical backup issues, like improving recovery time and reducing costs.

Backup and recovery issues are a growing concern for IT departments as more of their time is consumed due to longer backup windows and the physical demands of tape management. Further, IT backup administrators face additional challenges as they virtualize more and more of their servers. Just as virtualization poses new challenges in the primary storage realm, it adds difficulty to the process of backup and recovery. While virtualization technology optimizes the use of physical server resources this can also lead to a challenge when doing backups. With few VMs, backup was manageable, but as your virtualized environments have expanded to include critical production workloads backup of the environment has grown increasingly difficult. In many cases it has become a major impediment to virtualization expansion efforts.

Organizations must contemplate making the transition from tape to a more efficient disk-based backup approach. Businesses that use tape as their primary backup media are spending too much time on backup and recovery – and not enough investing in projects to move IT, and the business, forward. It's time for IT to take a serious look at some of the challenges arising from the continued use of traditional tape-based backup.



What's the problem?

Let's assess the major issues with tape:

- **Slow backup and restore times**

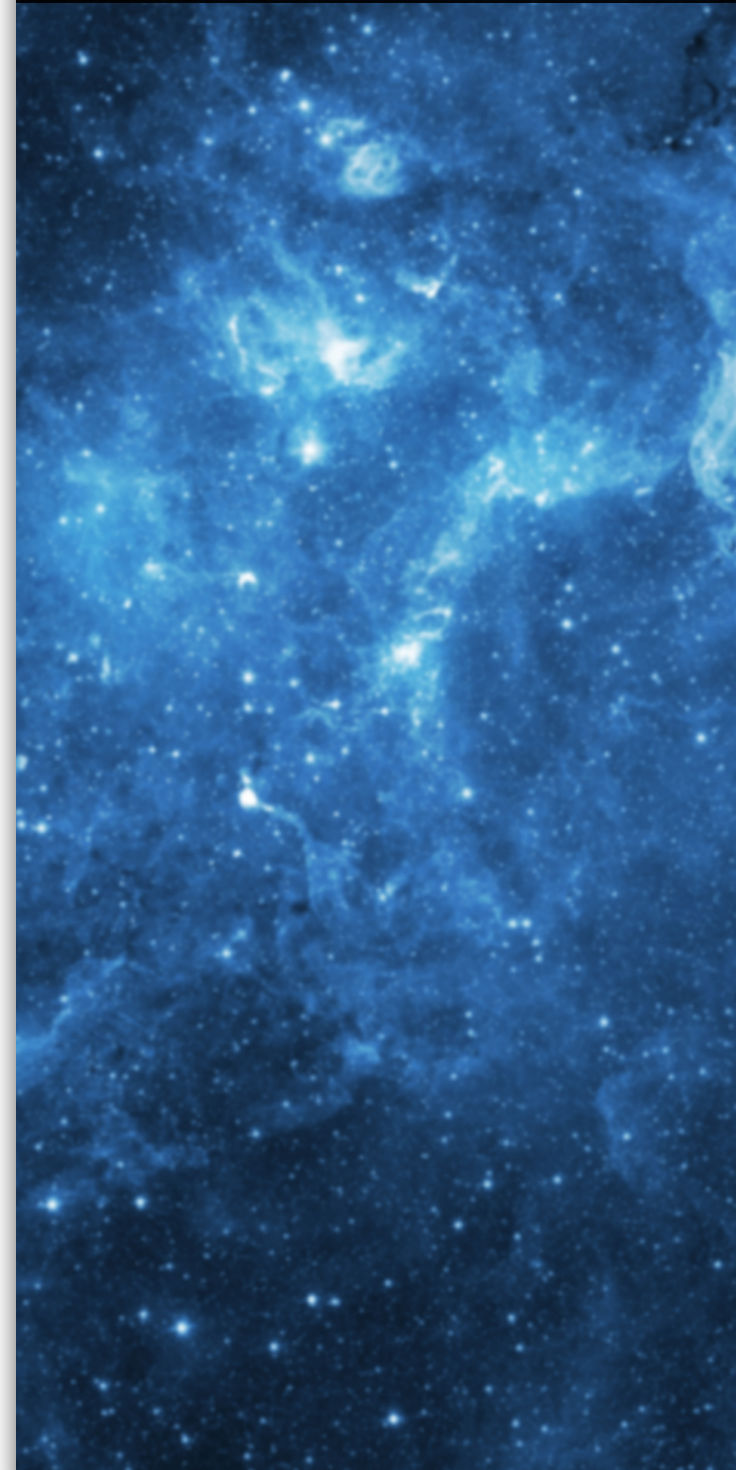
Tape requires physical loading and unloading which contributes to its inability to consistently meet backup windows. Another one of the inherent flaws is its long seek times.

- **Backup process and failures**

Let's face it – tape is not reliable. The Gartner Group estimates that 10% to 50% of all tape restores fail. Data located at regional offices, home offices or mobile devices often fall outside the reach of central data protection, increasing the risk of data loss.

- **Managing tape**

Tape is costly to manage. Traveling daily to a data center to retrieve tapes from a magazine is a hassle. Having to move tapes off site to a storage facility is costly and risky. The entire point of backing up data is to recover it in a timely fashion when needed. With tape, the recovery process is lengthy and painful. Tape forces IT departments to decide which information should be protected. Daily backups are getting larger and increasing backup times. Many IT departments are forced to choose which data will be excluded, such as e-mail, because there simply is not enough time to back up everything. This puts at risk data that could potentially be important for your business.



Our suggestion to solve your problems: Disk-based backup.

The challenges of using tape outlined above are affecting a growing number of businesses. More small to medium sized businesses are realizing that their data growth is exceeding realistic IT operational capabilities and forcing large investments in tape management. End-users expect applications and services to be available when they need them and an IT department constantly focused on backup and recovery cannot achieve this.

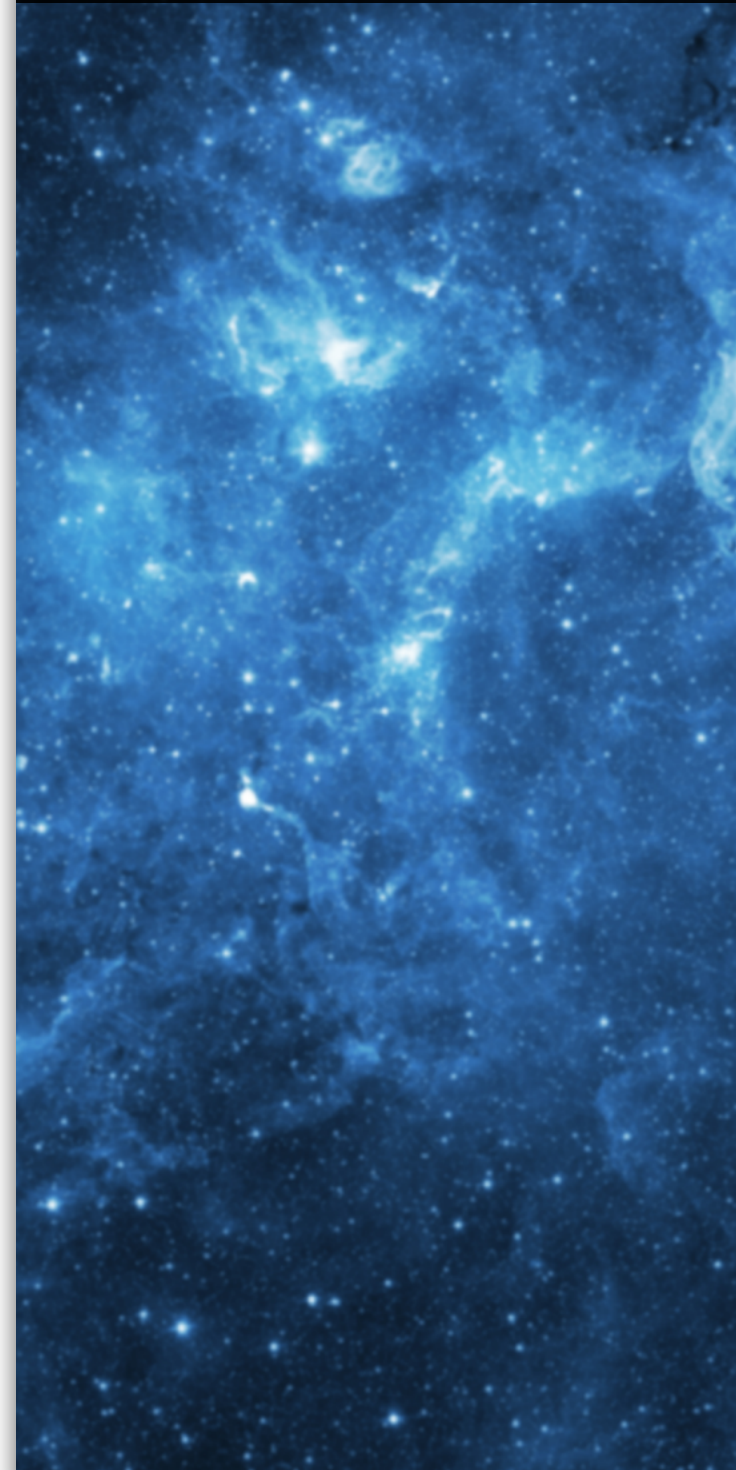
Increasingly, the effort, costs and risks of managing tape are being relegated to the past with disk-based solutions. It's time to think about a solution that is viable for your business. Softchoice knows from hands-on experience (see case study on page 9) that EMC Backup and Recovery solutions will enable you to strengthen your data protection, streamline backup and recovery, and meet a wide range of service levels.

- **Faster backup and restore times**

EMC disk-based backup solutions enable you to back up rapidly and reliably. Recovery time requirements are critical and meeting more aggressive backup windows is becoming increasingly difficult. EMC disk-based backup solutions allow you to restore your data in minutes rather than hours. Reducing time spent on backup and recovery means that your applications and system availability will not be reduced resulting in more satisfied end-users.

- **Decrease backup and recovery failures**

EMC disk-based backup greatly improves reliability. EMC systems have end-to-end data verification, automated fault detection and self-healing. The move to disk from tape means increased backup and recovery success, less risk, and greater IT and end-user productivity.



Our suggestion to solve your problems: Disk-based backup. (continued)

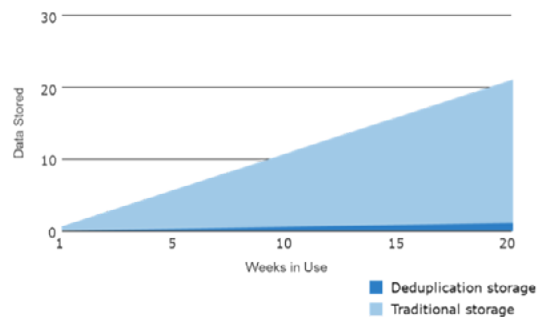
- **The business value: payback, ROI and more**

If you are concerned with ROI, research conducted by IDC in 2011 has demonstrated that the average payback period on an initial investment in EMC disk-based backup platforms is just seven months and that over a period of three years ROI is 450%. By reducing restore times, on average, from 17 to 2 hours and backup windows from 11 to 3 hours, IT staff productivity can be translated into dollars saved. Respondents to the IDC survey saved, on average, \$1.7 million in tape upgrade, media and maintenance costs over three years.¹

- **Increased efficiency**

Having multiple copies of the same data is unnecessary, inefficient, costly to manage and can lead to the exclusion of key data due to a lack of storage space. Disk-based backup solves these problems with data deduplication. Deduplication reduces the amount of data stored on disk by 10 to 30x, reducing storage capacity requirements and allowing you to keep more data that's important to your business. In addition, you can replace tape for disaster recovery, with cost effective replication of deduplicated backup data that reduces bandwidth required by 99%.

10–30 times less data stored with typical retention policies



1. IDC White Paper, sponsored by EMC, Generating Proven Business Value with EMC Next - Generation Backup and Recovery, October 2011.

Check the math, not convinced? Ask yourself these 4 questions

So, when should you make the switch to next generation disk-based backup? Asking yourself the following questions will help you decide:

- **Can I meet backup windows consistently?**

If backup windows are getting longer and can't be met consistently, it's time to make the switch. On average, businesses that switched to EMC Backup and Recovery found their backup windows were reduced from eleven hours to three.

- **Do I have too many backup failures?**

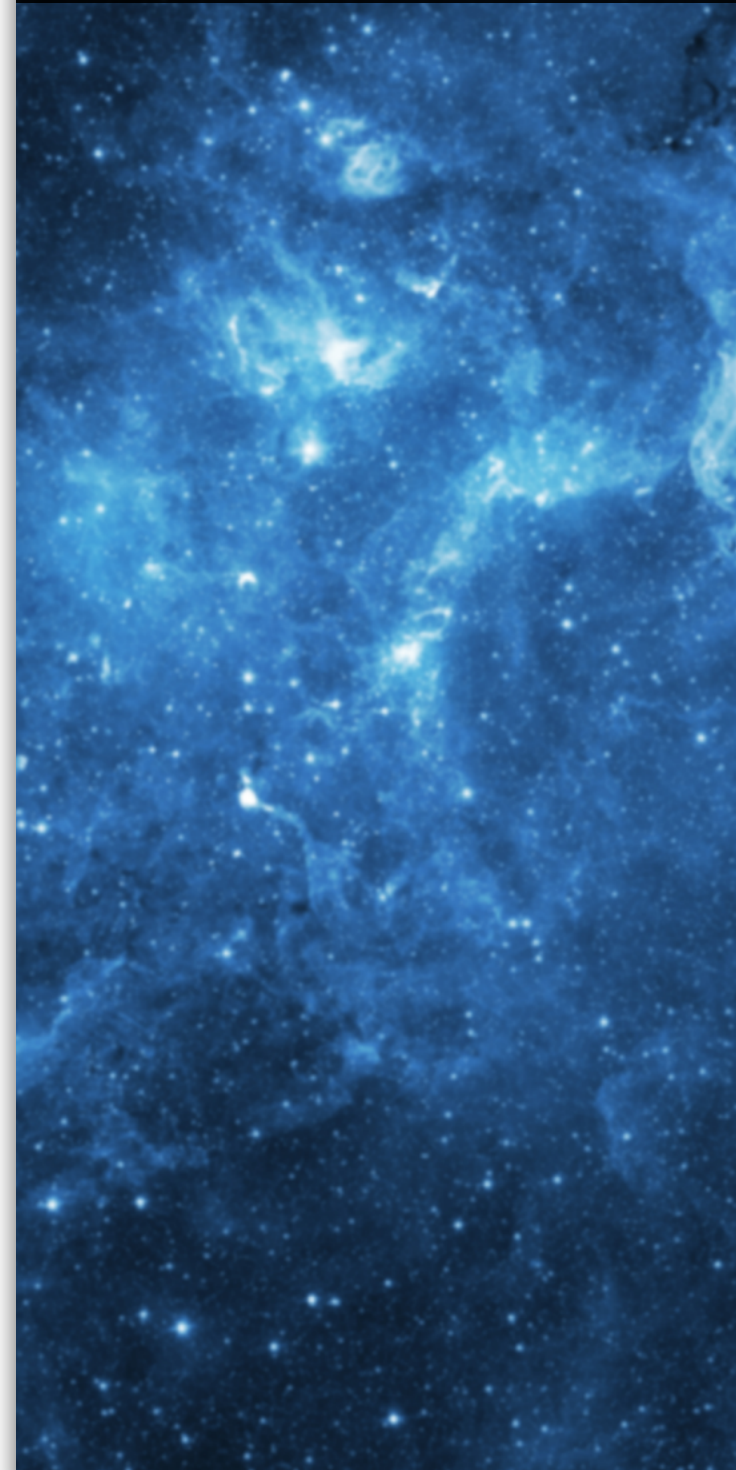
The bottom line is that tape fails. Businesses still using tape see 20% of backups fail to complete within allotted windows and recoveries that are unsuccessful 32% of the time. With 53% of organizations only able to tolerate an hour or less of downtime of mission-critical apps before business suffers, making the switch to disk can help turn these stats in your favor.

- **How fast are my backup costs growing?**

With data expected to grow 44x in this decade, businesses can't afford to have multiple copies of the same information. Disk-based backup with data deduplication reduces backup storage required by 10 to 30x. Less storage space needed means less to manage and less money spent. Managing tapes gets expensive. The more data you have the more tapes you will need to store. Reducing the expenditures on tapes and your storage environment will save your business money.

- **Can I meet my business needs supporting virtualization?**

Meeting backup windows in a virtualized environment is essential to maintaining your virtualization and transformation efforts while ensuring end-user satisfaction. Using disk-based backup optimized with deduplication can decrease backup times by 90%, accelerating virtualization efforts and allowing for an efficient IT transformation.



Case study

Softchoice (Avamar)

Softchoice has hands-on experience implementing EMC disk-based backup solutions. Below is a list of questions answered by our in house expert, **Hugh Forest**, Director of IT. Please press play below to watch and learn:

- What brought Softchoice to rethink our backup environment
- What key applications was Softchoice sacrificing in the backup
- When thinking about backup solutions today, what made Softchoice think about disk-based technology
- What made Softchoice choose EMC over other Backup solutions



Continue the learning.

- [The Loomis Case Study](#)
- [Tape is Dead](#)
- [EMC @ Softchoice](#)
- [The EMC Data Domain blog by Softchoice](#)

A Better Business

Softchoice believes in helping build better businesses for our customers. Our goal is to help your organization become more successful, more productive and more competitive.

Softchoice Services drives results by combining deep expertise and proven processes that correlate to your unique situation.

Softchoice's experienced team of certified experts is dedicated to helping you manage your technology challenges today. From design and planning to implementation, integration and migration, Softchoice's data center experts can help streamline your operations, improve availability, reliability and performance.

How can you define a roadmap to success?

At Softchoice, we believe that any IT project must start with a good plan. Whatever the project, the only way to really understand the scope and breadth is by uncovering the current state, identifying potential roadblocks and mapping out the future in logical phases.

Over 800 Softchoice assessment and advisory services completed in 2011

Sometimes the benefits of virtualization are not realized because the implementation is limited to staging areas or non-critical areas of the business. The result is a fragmented IT operational strategy for business throughout the entire lifecycle of application delivery services, increasing time-to-market.

The Softchoice Assessment and Advisory teams specialize in identifying, analyzing and helping you evaluate technology opportunities so you have a clear picture of the implications for your business and can develop a comprehensive strategy that optimizes your data center investment.

Softchoice's Data Center Advisory Services – connecting your business to technology opportunities by:

- Assessing your organization's existing physical environment
- Collecting and analyzing utilization metrics and modeling the physical infrastructure in a projected virtual environment
- Analyzing and interpreting financial payback metrics to determine the benefits of investing in virtualization

Common Challenges of Backup & Recovery

- Storage needs are expected to grow by 44 times in this decade.
- Length of time for backup processing is increasing
- Costs of storage media are increasing all the time

Learn more about how Softchoice partners with customers so they can make informed decisions that reduce their risks and help them gain a competitive edge.

Together we can develop solutions that drive a better business for you: » [Contact us today for more information.](#)

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