



Backup, Recovery, and Archive Solutions for Tivoli Storage Manager (TSM) Users

Getting more value from TSM

Key Customer Benefits

- Seventy-five percent improvement in backup window (two hours vs. eight hours).
- Time-to-restore decreased from hours to minutes per event, drastically improving end-user satisfaction.
- Saved \$22,500 on tape cartridges (90 TB/200 GB tape (LTO1) * \$50).
- Moved to 100-percent tapeless backup operation for e-mail application; realized easier management and higher availability.
- Reduced the time required to update the secondary storage pool.
- Improved regulatory compliance (HIPPA).
- EMC Disk Library proved easy to manage; so there was no training required for operators.

Tape Backup Challenges in TSM Environments

TSM is a robust, feature-rich backup software solution, but its complexities have also hindered effective tape backups in the past. EMC has a solution which leverages TSM's strengths, resulting in significantly higher TSM backup service levels.

- Poor backup and restore performance—The TSM architecture creates tape library bottlenecks.
- Poor reliability of tape assets and media cartridges—Tape library and media availability no longer meet required enterprise service levels.
- Inability to complete all required tape management, backup, or recovery tasks within a 24-hour window.
- Difficulty in sustaining best practices for:
 - Maintaining the synchronization of the storage pool (original backup “A”) with the copy storage pool (copy of “A”). This enables users to keep their storage pools up to date, which is critical for disaster recovery purposes.
 - Performing data grooming techniques designed to improve restore times and lower costs, such as co-location and reclamation. Unfortunately, because these “defrag” activities are so time-consuming and painful with TSM, many operators take short cuts, but these shortcuts can backfire and result in extended recovery times.

Customer Example—Large West Coast healthcare provider

- Backup times had grown 25 percent in the last year. Backups were taking eight hours per day which was cutting into the time associated with other required TSM activities, specifically, end-user restores and storage pool maintenance.
- Customer experienced a high level of restore requests for e-mail, which were delayed because the tape library was preoccupied with backup functions, resulting in dissatisfied end users.
- The physical tape library being used was undersized and failed often, resulting in extra break/fix time for operators.
- Customer discovered their growing backup problems were placing pressure on their regulatory compliance (HIPPA).

The Choices

- Upgrade to a larger tape library per IBM's recommendation.
- Replace the tape library with an EMC® disk array with ATA drives
- Substitute the tape library with an EMC Disk Library

The Solution

- Install the EMC Disk Library DL700 Enterprise Solution with 20 TB ATA storage.

Points to Consider

- How do growing backup windows affect the timing and execution of remaining TSM functions? Are TSM tasks being completed on time, within the allocated window?
- Will adding more tape hardware solve the problem or make it worse?
- How much do you spend on IT support for damaged tape drives or unreadable tape cartridges?
- How long does the average restore take? How many cartridges does it take to perform a simple restore?
- How often do you perform tape reclamation? How long does it take?
- What would be the impact of adding thousands of new virtual tape drives to your backup environment?
- How often do you update your storage pool? What is the time difference between the storage pool and copy storage pool?

Future Consideration—Customer investigating the following:

- Possible retirement of the TSM disk cache, backing up directly to the EMC Disk Library
- Backup Assessment Service to evaluate backup/recovery bottlenecks and potential solutions, as well as identify fixed content for future active archiving.
- Further enhancements to the TSM environment by retiring disk cache—go straight to EMC Disk Library.
- Enhance disaster recovery by employing a distance solution—EMC Disk Library to EMC Disk Library over distance to replace copy storage pool.

Take the Next Step

To discover the advantages an EMC backup, recovery, and archiving solution can bring to your TSM backup environment, contact your local EMC representative, authorized value-added systems integrator, or visit our website at www.EMC.com/br.



EMC Corporation
Hopkinton
Massachusetts
01748-9103
1-508-435-1000
In North America 1-866-464-7381

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