



IBM Tivoli Storage Manager for Hardware

Highlights

- **Realize a “near zero-impact” backup**
- **Achieve a “server-less” solution architecture**
- **Leverage your investment in SAN technology**
- **Integrate and optimize your data protection solutions**

Realize a “near zero-impact” backup

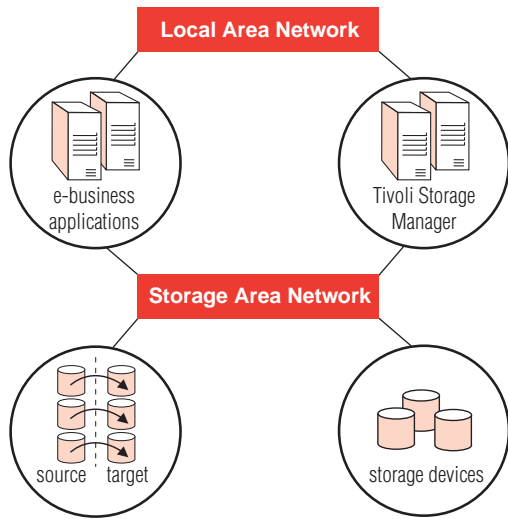
IBM® Tivoli® Storage Manager for Hardware helps protect your business-critical databases that require 24x7 availability. It offers new options to implement high-efficiency backup of business-critical applications while virtually eliminating backup-related impact on the performance of the production host. This is done by integrating the FlashCopy® function of IBM Enterprise Storage Server (ESS) with Tivoli Storage Manager and its database protection capabilities for DB2®, Oracle and SAP R/3 databases. Likewise, EMC Symmetrix TimeFinder is integrated with Tivoli Storage Manager and its protection capabilities for Oracle and SAP R/3 databases. The product is designed to enhance the capabilities of IBM Tivoli Storage Manager for Databases or IBM Tivoli Storage Manager for ERP to support a “near zero-impact” backup process.

The integrated solution: IBM Tivoli Storage Manager for Hardware

The solution takes advantage of the ESS machine’s robust design and the enhanced FlashCopy feature. In normal operation, production data are

written to the source volumes while dedicated target volumes are reserved for backup purposes within the ESS. Backups are taken from the copy. This solution is also sometimes called “server-less” backup.

A production server and a backup server are connected through the SAN to one ESS. The source volumes are attached to the production server, and the target volumes are assigned to the backup server. While the application continues to run (writing data to the source volumes), you can start Tivoli Storage Manager for Hardware to activate the FlashCopy feature of the ESS machine. In essence, the FlashCopy command tells the ESS to create an instant copy of the source volumes to the target volumes. After Tivoli Storage Manager for Hardware has imported volume groups and mounted file systems of the target volumes, the Tivoli Storage Manager for ERP/Databases product will be called to back up the application’s data to the Tivoli Storage Manager server, reading the data that’s just been “flash copied.” When this backup process is complete, Tivoli Storage Manager for Hardware



SAN exploitation

withdraws the target volumes within the ESS and returns them to be reused. They are released and can be used for other controlled purposes, such as supporting additional applications as target volumes, or to build the basis for advanced cloning functions. The complete process can run online (hot)

and virtually eliminates the backup-related load from the production server.

EMC Symmetrix support

This product supports comparable functionality with the EMC Symmetrix TimeFinder “Split Mirror” functions to realize a “near zero-impact” backup.

Technical requirements:

Hardware—EMC Symmetrix system with licensed TimeFinder interface

Software—Tivoli Storage Manager 4.1; Tivoli Data Protection for Oracle 2.1.0 or Tivoli Data Protection for SAP R/3 3.1.2 or later; Oracle 8i, 8.1.5; Sun™ Solaris™ 7

Integrate and optimize your data protection products

Tivoli Storage Manager for Hardware integrates and optimizes the capabilities of three prerequisites:

- *Tivoli Storage Manager, the Tivoli flagship storage management product*
- *Tivoli Storage Manager for Databases or Tivoli Storage Manager for ERP*
- *FlashCopy functions of IBM ESS “Shark” Copy Services*

Using these products you can manage your FlashCopy, TimeFinder and backup operations by leveraging the performance, scheduling and media management functions of Tivoli Storage Manager to help deliver continuous application access and superb protection of data for your organization.

Customer value

The solution can add value to your storage and backup procedures because it helps keep essential e-business applications operating 24x7. Tivoli Storage Manager for Hardware is designed to let you tap in to the power of this high-performance backup routine, quickly and cost-effectively. With Tivoli Storage Manager for Hardware directing traffic you can maintain almost 100% availability of the e-business application, even during the backup window. It avoids the complexity of implementing a manually scripted solution in your

SAN environment. There's no need to write backup scripts and continuously adapt them as your resources or requirements change. Furthermore, the restore process is fast, so that the restored databases can return online quickly to minimize downtimes even in disaster-recovery scenarios. It provides a Tivoli-supported, robust, production-oriented solution.

To learn more

For information on IBM Tivoli Storage Manager for Hardware and integrated solutions from IBM, contact your IBM sales representative or visit info.tivoli.com/storageforsuccess

Tivoli software from IBM

An integral part of the comprehensive IBM e-business infrastructure solution, Tivoli technology management software helps traditional enterprises, emerging e-businesses and Internet businesses worldwide maximize their existing and

future technology investments. Backed by world-class IBM services, support and research, Tivoli software provides a seamlessly integrated and flexible e-business infrastructure management solution that uses robust security to connect employees, business partners and customers.

Technical requirements

DB2 environments

Hardware

IBM ESS 2105, Model Exx or Fxx, with one FlashCopy feature 1830-1835, selected to match expected FlashCopy backup requirements. These are supported on the IBM AIX® platform. LAN connection between production and backup server.

Software

- IBM AIX 4.x
 - IBM ESS Copy Services (IBM ESS SubSystem Device Driver function is supported)
 - DB2 Universal Database™ 7.1, Fixpack 4 or later
 - Tivoli Storage Manager 4.1 with Managed System for LAN feature
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Oracle environments

Hardware

IBM ESS 2105, Model Exx or Fxx, with one FlashCopy feature 1830-1835, selected to match expected FlashCopy backup requirements. These are supported on the IBM AIX platform. LAN connection between production and backup server.

Software

- IBM AIX 4.x
 - IBM ESS Copy Services (IBM ESS SubSystem Device Driver function is supported)
 - Oracle database 8i, Release 8.1.5 (Compliant releases of Oracle software might require configuration changes to enable the “near zero-impact” backup process to work.)
 - Tivoli Storage Manager 4.1 or higher with Managed System for LAN feature
 - Tivoli Data Protection for Oracle 2.1 or higher
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SAP R/3 environments

Hardware

IBM ESS 2105, Model Exx or Fxx, with one FlashCopy feature 1830-1835, selected to match expected FlashCopy backup requirements. These are supported on the IBM AIX platform. LAN connection between production and backup server.

Software

- IBM AIX 4.x
 - IBM ESS Copy Services (IBM ESS SubSystem Device Driver function is supported)
 - Oracle database 8.x at level supported by the SAP DBA tools
 - SAP R/3 4.5B or higher with the corresponding Oracle database
 - Tivoli Storage Manager 4.1 or higher with Managed System for LAN feature
 - Tivoli Data Protection for R/3 3.2 or higher
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