



## Storage management solutions: deriving substantial benefits from IBM TotalStorage Productivity Center.



September 2008

## Contents

- 2 Overview**
- 3 Perform many critical tasks from a single management platform**
- 4 Highlights of IBM TotalStorage Productivity Center**
- 5 Understand the potential financial benefits of IBM TotalStorage Productivity Center**
- 9 Help improve capital expenditures (CAPEX) with better capacity, configuration and asset management**
- 10 Help reduce operational expenditures (OPEX) by centralizing storage infrastructure management**
- 11 Summary**
- 11 For more information**
- 11 About IBM Service Management**

## Overview

As organizations strive to better manage their business infrastructure, leaders in operations management and system administration have been charged to minimize service disruptions by better understanding the impact of changes on the infrastructure; integrate and streamline processes across silos to reduce complexity; and implement “green” IT. Storage infrastructure management can be a key element in addressing these issues successfully.

The IBM TotalStorage® Productivity Center suite of storage infrastructure management tools can help you reduce the complexity of managing your storage environments by centralizing, simplifying and automating storage tasks associated with storage systems and networks, replication services and capacity management.

A comprehensive solution, IBM TotalStorage Productivity Center is designed to help you improve storage total cost of ownership (TCO) and return on investment (ROI) by combining assets, capacity, performance and operational management into a single, integrated platform. This solution helps you handle pressing business infrastructure issues in the following ways:

- *Managing change* — IBM TotalStorage Productivity Center offers advanced change management features that help you quickly identify changes that have occurred within an entire storage area network (SAN) topology.
- *Integration* — The foundation of its management capabilities is based on industry standards, enabling the solution to provide storage resource management capabilities to mixed-vendor storage environments.
- *Green IT* — It also helps you maintain a highly tuned and energy-efficient storage environment, with capabilities that allow you to maximize your storage investments.

*In the 2007 Gartner Magic Quadrant report, IBM TotalStorage Productivity Center was rated number one among other vendors for having the most comprehensive, easy-to-use and scalable offering.<sup>1</sup>*

#### **Perform many critical tasks from a single management platform**

The considerable business value of IBM TotalStorage Productivity Center – and its single management platform – is demonstrated by its ability to:

- Centralize the management of storage infrastructure from a single interface using role-based administration and single sign-on.
- Provide a single management application with modular integrated components that include common services for simple, consistent configuration and consistent operations across host, fabric and storage systems.
- Manage performance and connectivity from the host file system to the physical disk, including in-depth performance monitoring and analysis on SAN fabric performance.
- Manage the capacity utilization and availability of storage systems, file systems and databases.
- Monitor, manage and control (zone) SAN fabric components.
- Automate capacity provisioning of file systems.
- Monitor and track the performance of SAN-attached Storage Management Interface Specification (SMI-S) compliant storage devices.
- Manage advanced replication services (Global Mirror, Metro Mirror and IBM FlashCopy®).

The comprehensive reporting capabilities of IBM TotalStorage Productivity Center span several areas commonly associated with the capabilities of storage resource management (SRM) products, including:

- Automation.
- Chargeback.
- Performance trending.
- Capacity utilization.
- Change configuration reporting.
- Best-practice configuration guidance.
- SAN planning tools that allow you to streamline configuration and implementation processes.

The following table provides detailed examples of the value IBM TotalStorage Productivity Center can deliver in each of these areas.

<b>Highlights of IBM TotalStorage Productivity Center</b>	
<b>Business benefit</b>	<b>Examples</b>
More efficient utilization of storage assets	<ul style="list-style-type: none"> <li>• Enables redistribution of capacity to help reduce costs</li> <li>• Helps optimize storage asset utilization</li> <li>• Helps improve configuration management</li> <li>• Helps reduce hardware investment by more effectively monitoring performance of SAN switches and storage arrays</li> </ul>
Centralized storage management	<ul style="list-style-type: none"> <li>• Helps reduce administrator effort required to provision storage capacity and manage SANs and storage devices</li> <li>• Automates the gathering of management information and reporting on capacity and storage assets</li> <li>• Helps simplify storage configuration processes with best-practice guidance planning tools</li> </ul>
Heterogeneous device management	<ul style="list-style-type: none"> <li>• Provides the information required to plan for a tiered storage environment</li> <li>• Helps prepare for virtualization of tiered storage by visualizing files and databases in the storage environment at capacity levels</li> <li>• Enables the reduction of the number of storage management products needed to manage storage from different vendors</li> </ul>
Service level maintenance	<ul style="list-style-type: none"> <li>• Helps establish direct links between business processes, applications and back-end storage</li> <li>• Can reduce problem diagnosis time to help improve availability of servers and applications</li> <li>• Speeds identification of failures by automatically alerting "out of line" conditions</li> <li>• Helps simplify root-cause analysis by presenting all alert, configuration and status information at a single point</li> <li>• Helps assure defined services for storage using performance reporting, alert thresholds and trending</li> <li>• Automates monitoring of SAN fabric and port availability.</li> <li>• Highlights potential service level issues in threshold-based capacity alerts</li> <li>• Helps to quickly isolate network problems due to configuration changes</li> </ul>

## Highlights

### Understand the potential financial benefits of IBM TotalStorage Productivity Center

IBM TotalStorage Productivity Center can provide new efficiencies in managing your storage environments – both at an operational level and in leveraging existing storage assets more effectively. Look for the IBM solutions that best meet your needs:

*IBM TotalStorage Productivity Center for Data* is a premier Java™- and Web-based solution that can help you identify, evaluate, control and predict your enterprise storage management assets, whether they are directly attached, network-attached or SAN-attached. Because the data feature is policy-based, through its autonomic self-healing capabilities, it can detect potential problems and automatically make adjustments based on the policies and actions you have established. IBM TotalStorage Productivity Center for Data includes both file system and database storage analysis, and a chargeback capability to help establish the true cost of storage.

With energy costs becoming a major part of IT budgets, organizations worldwide have a high priority to implement “green” IT

According to Gartner, energy costs are quickly becoming a major part of IT budgets: “More than 70% of Global 1000 enterprises will face significant data center problems, such as limited power and floorspace, during the next four years.”<sup>2</sup> That makes it clear that implementing “green” IT is, and should be, a high priority for organizations worldwide.

The green features of IBM TotalStorage Productivity Center can play an important role in helping your organization manage power consumption through the ability to help reduce the amount of space required to keep data assets finely tuned and highly available. The solution’s data feature can help

you improve storage utilization, plan for future capacity and ensure availability by providing storage in an on demand manner for file systems. This feature can deliver the following functions:

- Discovers and monitors disks, partitions, shared directories and servers.
- Monitors and reports on capacity and utilization across platforms, helping to identify trends and prevent problems.
- Provides a wide variety of standardized reports about file systems and storage infrastructure to track usage and availability.
- Provides file analysis across platforms, helping to identify and reclaim space used by nonessential files.
- Identifies hierarchical storage management (HSM) candidate files that could reside on lower-cost storage media.
- Provides policy-based management and automated capacity provisioning for file systems when user-defined thresholds are reached.

#### IT cost reductions/storage management labor savings

**Capacity and performance management: 35%**

- Improves capacity management and planning by proactively monitoring and enforcing storage usage policies

**Incident and problem management: 6%**

- Reduces call volumes and improves diagnosis for help-desk staff

**Inventory control and recording: 30%**

- Simplifies storage asset management and reporting

**Storage purchase avoided: 10%**

- Helps reclaim wasted space and reduce the need to purchase additional storage capacity

#### Business operating efficiency/business strategic advantage

**Increased application/system availability: 8%**

- Can aid in capacity planning, and take corrective actions to reduce downtime

*IBM TotalStorage Productivity Center for Fabric* provides a comprehensive, standards-based solution for managing and maintaining the health of heterogeneous enterprise SANs. The Fabric feature works with a broad range of devices, allowing your enterprise to leverage its existing technology.

#### IT cost reductions/storage management labor savings

**Capacity and performance management: 10%**

- Can help improve capacity and performance management of the SAN environment

**Inventory control and recording: 10%**

- Includes automatic resource and topology discovery, monitoring and alerts, zone control and SAN error-prediction capabilities

**SAN resource management: 25%**

- Provides automatic device discovery and SAN event management to enable management of the SAN environment from a central console

**Incident and problem management: 4%**

- Helps identify and resolve critical SAN issues quickly

#### Business operating efficiency/business strategic advantage

**Availability risk mitigation (increased availability): 2%**

- Aggregates SAN event information from multiple heterogeneous sources to help identify and resolve issues quicker

*IBM TotalStorage Productivity Center for Disk* provides a single point of control for configuring, managing and monitoring performance of SAN storage devices that are based on SMI-S. When used in combination with IBM TotalStorage Productivity Center for Fabric, the storage administrator can configure storage devices from a single point, view the SAN status and provide operational support to these storage devices.

#### IT cost reductions/storage management labor savings

**Capacity and performance management: 20%**

- Allows administrators to monitor metrics such as I/O rates and cache utilization

**SAN resource management: 25%**

- Provides a central user interface for configuring and managing all supported devices on the SAN

**Incident and problem management: 2%**

- Reduces the overall workload on the incident and problem management staff

#### Business operating efficiency/business strategic advantage

**Availability risk mitigation (increased availability): 4%**

- Helps ensure high availability for critical applications by providing customization of threshold settings and generating alerts when thresholds are exceeded

## Highlights

*IBM TotalStorage Productivity Center for Replication* provides a single point of control for point-in-time and remote volume replication services. This supports advanced copy services and functions such as automated source-target matching, cross-device consistency groups, FlashCopy, Metro Mirror and Global Mirror.

### IT cost reductions/storage management labor savings

**Archiving: 15%**

- Provides significant productivity benefits and helps to minimize potential errors

**Capacity management: 50%**

- Simplifies the management of copy services by providing control of the start, suspension and resumption of copy tasks, and monitoring and managing copy sessions through automation.

### Help improve capital expenditures (CAPEX) with better capacity, configuration and asset management

IBM TotalStorage Productivity Center helps extract more value out of existing storage by delivering better rationalization and understanding of disk space and data residing on that disk, as well as a better understanding of the existing performance of SAN infrastructure.

IBM TotalStorage Productivity Center for Data provides a “green” set of in-depth analysis, reporting and forecasting mechanisms to look at an organization’s current environment and help forecast storage growth

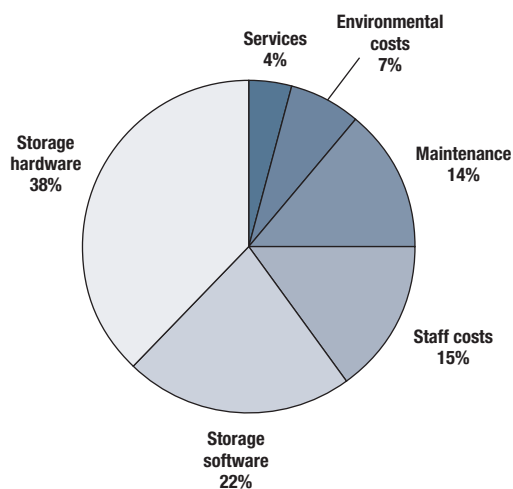
When storage infrastructure management tools classify data, that information can then be used to help enforce optimal utilization by business units. IBM TotalStorage Productivity Center for Data provides a “green” set of in-depth analysis, reporting and forecasting mechanisms to look at an organization’s current environment and help forecast storage growth.

In addition, storage infrastructure management can tell an organization a great deal about the storage environment, including availability, performance and capacity use.

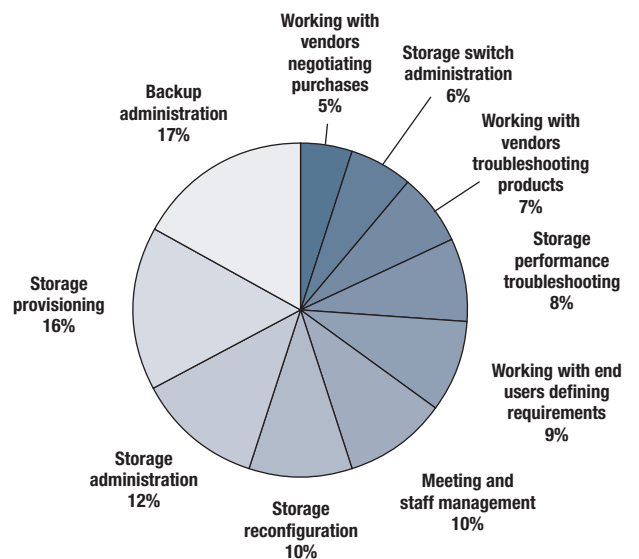
**Help reduce operational expenditures (OPEX) by centralizing storage infrastructure management**

To help reduce overall labor costs, IBM TotalStorage Productivity Center helps you simplify the management of storage infrastructure. As storage needs grow and storage technologies become more diverse and more complex, the challenges of containing storage-related IT labor costs also increase. According to industry analyst TheInfoPro, repetitive storage management represents more than 50 percent of staff time invested in storage.<sup>3</sup> IBM TotalStorage Productivity Center helps you consolidate management by providing a platform with a number of broad capabilities.

**Question: How is your storage budget divided?**



**Question: Where is your time spent?**



### Highlights

IBM provides comprehensive, integrated solutions and services to meet the growing challenges of storage and information management across the entire global IT environment

### Summary

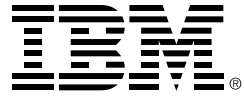
As operations management and system administration personnel strive to better manage their business infrastructures, the ability to improve storage and information management can play a key role. IBM provides comprehensive, integrated solutions and services, such as IBM TotalStorage Productivity Center, to meet the growing challenges of storage and information management across the entire global IT environment. With IBM solutions such as IBM TotalStorage Productivity Center in place, you can derive the most value from your storage resources, while ensuring that your information is protected and available according to the policies and requirements set by your business.

### For more information

To learn more about deploying IBM TotalStorage Productivity Center today, talk to an IBM representative or IBM Business Partner. They can help define the best solution and measure the business value of the software based on your individual environment. More information about IBM TotalStorage Productivity Center is also available at [ibm.com/servers/storage/software/center](http://ibm.com/servers/storage/software/center)

### About IBM Service Management

IBM Service Management solutions help organizations manage their business infrastructure and deliver quality service that is effectively managed, continuous and secure for users, customers and partners. Organizations of every size can leverage IBM services, software and hardware to plan, execute and manage initiatives for service and asset management, security and business resilience. Flexible, modular offerings span business management, IT development, operations management and system administration, and draw on extensive customer experience, best practices and open standards-based technology. IBM acts as a strategic partner to help customers implement the right solutions to achieve rapid business results and accelerate business growth.



© Copyright IBM Corporation 2008

IBM Corporation  
Route 100  
Somers, NY 10589  
U.S.A.

Produced in the United States of America  
September 2008  
All Rights Reserved

IBM, the IBM logo, [ibm.com](http://ibm.com), FlashCopy, TotalStorage and Visibility. Control. Automation. are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both. If these and other IBM trademarked terms are marked on their first occurrence in this information with a trademark symbol (® or ™), these symbols indicate U.S. registered or common law trademarks owned by IBM at the time this information was published. Such trademarks may also be registered or common law trademarks in other countries. A current list of IBM trademarks is available on the Web at "Copyright and trademark information" at [ibm.com/legal/copytrade.shtml](http://ibm.com/legal/copytrade.shtml)

Java and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries or both.

Other company, product and service names may be trademarks or service marks of others.

<sup>1</sup>Gartner, "Magic Quadrant for Storage Resource Management and SAN Management software," March 2007.

<sup>2</sup>Gartner, "Green IT: Immediate Issues for Users to Focus On," August 7, 2008.

<sup>3</sup>TheInfoPro, "Storage Study Wave 7" (survey of Fortune 1000 companies), April 2006.