

IBM TotalStorage Productivity Center (TPC) Suite



IBM TotalStorage Productivity Center can help you manage the capacity utilization of storage systems, file systems and databases and automate file-system capacity provisioning, perform device configuration and management of multiple devices from a single user interface, tune and proactively manage the performance of storage devices on the Storage Area Network (SAN) and manage, monitor and control your SAN fabric.

Highlights

The IBM TotalStorage® Productivity Center Suite is designed to:

- ***Help centralize the management of your storage infrastructure from a single interface using role-based administration and single sign-on***
- ***Manage performance and connectivity from the host file system to the physical disk, including in-depth performance monitoring and analysis on SAN fabric performance***
- ***Provide a single management application with modular integrated components that are easy to install and provide common services for simple/consistent configuration and consistent operations across host, fabric and storage systems***

The mission: Improve storage infrastructure management

As the need to store and retain data explodes, there becomes a critical need for businesses to find better ways to control the cost of storage. Managing storage infrastructure has grown in complexity as businesses continue to acquire new storage infrastructures or a mix of multi-vendor storage assets via acquisitions or company mergers. Businesses must be able to identify, evaluate, control and predict the growth

of data through its lifecycle in order to meet storage service levels in accordance with IT Information Library (ITIL) and data retention requirements.

Both requirements—managing storage infrastructure and the data that resides there—are highly labor intensive. Storage infrastructure management tools such as IBM TotalStorage Productivity Center can help customers reduce the complexity of managing their storage environments by centralizing, simplifying and automating storage tasks associated with storage systems, storage networks, replication services and capacity management.

IBM TotalStorage Productivity Center is designed to reduce total cost of ownership by:

- *Reducing administration costs through centralized management of heterogeneous storage*
- *Significantly reducing planned downtime*
- *Reducing Backup/Restore costs*
- *Improving storage utilization—storage systems and storage infrastructure*
- *Simplifying overall IT operations*



The solution: IBM TotalStorage Productivity Center

IBM TotalStorage Productivity Center suite of products includes:

- *IBM TotalStorage Productivity Center for Fabric*
- *IBM TotalStorage Productivity Center for Data*
- *IBM TotalStorage Productivity Center for Disk*
- *IBM TotalStorage Productivity Center for Replication*
- *IBM TotalStorage Productivity Center Basic Edition*

IBM TotalStorage Productivity Center is an integrated suite that includes a single user interface to manage capacity, storage networks, storage systems and replication services. Productivity Center provides both role-based administration and single-sign-on capabilities. Additionally, the suite is designed to provide the foundation for storage service level management by offering storage system and SAN performance and availability management. This includes connectivity reporting between file systems and physical disk as well as SAN and disk subsystem failure and audit logging.

IBM TotalStorage Productivity Center provides a central console and topology viewer for a number of storage infrastructure management tasks, including:

- *Monitoring: virtualizing the infrastructure and accessing health at a glance, and logs*
- *Planning: anticipating problem areas and trends*
- *Configuration: providing allocation, zoning and masking*
- *Reporting: displaying capacity, utilization and performance*
- *Problem Determination: providing aggregated status, drill down and impacted resources identified*

IBM TotalStorage Productivity Center Standard Edition includes three components of the suite as one bundle at a single price: Productivity Center for Data, Productivity Center for Fabric and Productivity Center for Disk.

Managing heterogeneous storage environments

IBM TotalStorage Productivity Center provides an integrated storage infrastructure management suite that is capable of managing both

heterogeneous storage and IBM System Storage™ products. It is by design that IBM TotalStorage Productivity Center provides the some of best device, capacity, availability and performance management for IBM platforms as well as significant management capabilities for managing heterogeneous storage. Two key areas of focus are important to highlight: performance management of storage systems and storage networking platforms as well as capacity and operational management of IBM and heterogeneous storage systems.

IBM disk support includes operational control, asset and capacity management, and performance reporting of IBM TotalStorage Enterprise Storage Server® Models 800 and F20, IBM System Storage DS8000™, DS6000™, DS4000™ and the SAN Volume Controller. IBM TotalStorage Productivity Center is designed to support discovery, asset and capacity reporting for IBM TotalStorage 3584 Tape Library and discovery/element manager launch of IBM 3494 Tape Library.

Heterogeneous storage support is offered via the Storage Networking Industry Association's Storage Management Initiative Specification (SMI-S) Versions 1.0.2 and 1.1. Management capabilities here include operational control, asset/capacity management, as well as provisioning of heterogeneous storage platforms. These include storage devices from Hitachi Data Systems, Hewlett-Packard Co., EMC, Network Appliance and Engenio. IBM TotalStorage Productivity Center additionally provides performance reporting at the port and switch levels for platforms from Brocade Communications, McDATA Corp. and Cisco® Systems.

Productivity Center for Data

IBM TotalStorage Productivity Center for Data provides over 400 enterprise-wide reports, monitoring and alerts, policy-based action and file-system capacity automation in a heterogeneous environment. IBM TotalStorage Productivity Center for Data is designed to help improve capacity utilization of file systems and databases and add intelligence to data protection and retention practices.



With Productivity Center for Data, you can address the challenges of an on demand environment with customizable storage-management policies. It is designed to provide a single interface to manage storage assets. It provides a suite of tools to help enterprises to identify, evaluate, control and predict storage usage. It also is designed to enable management of key aspects of the storage infrastructure: capacity, assets, events and availability. Productivity Center for Data offers active, policy-based management for an automated, self-healing approach to storage resource management.

Productivity Center for Data also includes asset management and business unit chargeback capabilities, enabling you to align your storage infrastructure with business objectives and manage storage as an internal, application-driven utility.

Today, more customers are looking for ways to organize their corporate information, manage it efficiently and establish service levels for different classes of storage. Productivity Center for Data can assist with all three elements. Productivity Center for Data is designed to provide autonomic computing capacity management through its file-system-extension capability. Through monitoring, Productivity Center for Data detects when a user-defined threshold has been reached, and extend the file system, to help prevent a potential outage.

Productivity Center for Data is designed to enable you to define and enforce storage policies. It provides event management, which you can use to help fix or avoid storage outages. And you can choose to be notified before any corrective action is executed.

Key features include:

- *Designed to offer comprehensive enterprise reporting, monitoring and alerts to help improve storage utilization and availability, and help you manage more with the same resources*
- *Designed to provide capacity management and automated storage provisioning*
- *Provides intelligent management options, subsystem reporting and network-attached storage (NAS) support*
- *It is also designed to enable storage administrators to monitor, report on and manage growing NAS resources with a universal view of direct-attached storage and NAS—from a file system or application perspective.*
- *Chargeback for storage capacity usage based on multiple metrics to help customers move to an On Demand storage environment.*
- *Direct Tivoli® Storage Manager integration allows administrators to initiate a Tivoli Storage Manager archive or backup via a constraint or directly from a file report simplifying policy based actions.*

IBM Productivity Center for Fabric

IBM TotalStorage Productivity Center for Fabric is designed to provide automated device discovery, topology rendering, error detection and fault isolation, SAN error predictor, zone control, real-time monitoring and alerts, and event management for heterogeneous enterprise SAN environments.

IBM TotalStorage Productivity Center for Fabric is designed to help simplify the management and improve the availability of the SAN environment.

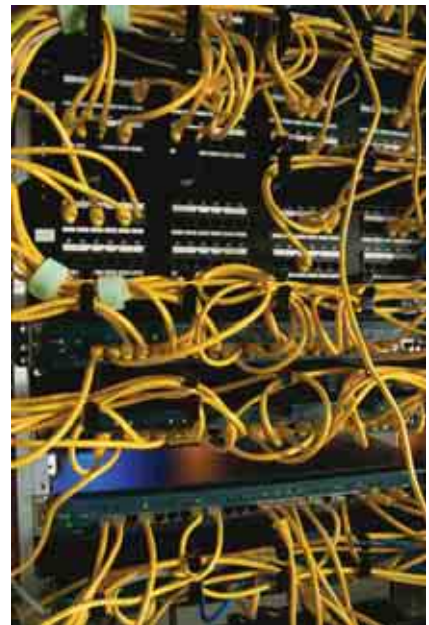
Productivity Center for Fabric is designed to provide automatic device discovery and allows multiple SAN views, including physical, logical and zone views. Because administrators are able to gather configuration, network statistics and other status information from switches, they can view and analyze multiple aspects of the storage environment, including capacity, utilization, assets and availability. Administrators can use this information to determine which systems, for example, are approaching maximum capacity and which systems are near minimums, so that they can perform load balancing as needed. Productivity Center for Fabric monitoring capability is designed to detect storage events and generate the appropriate alerts to the administrator.

Productivity Center for Fabric also is designed to provide a number of SAN availability features, including SAN error protector. An autonomous computing capability, SAN error predictor is designed to help predict SAN network problems before they become severe and impact data and application availability. This functionality incorporates predictive failure analysis into the storage network environment, designed to allow administrators to be proactive in managing SAN availability.

Additionally, Productivity Center for Fabric is designed to provide basic diagnostic capabilities to show which resources are impacted by an availability or performance issue in the SAN. Today, it can monitor performance at the port and switch level, and display this information in the common topology viewer for IBM TotalStorage Productivity Center.

Key features include:

- *Designed to help you potentially improve storage return on investment by keeping SANs operational reliably and dependably*
- *Designed to help reduce storage administration costs by simplifying the management of complex SANs*



- *Designed to offer continuous real-time monitoring and fault identification to improve SAN availability*

Productivity Center for Disk

IBM TotalStorage Productivity Center for Disk is designed to enable device configuration and management of SAN-attached devices from a single console. In addition, it also includes performance capabilities to help monitor and manage the performance of the devices' disks. IBM TotalStorage Productivity Center for Disk is designed to help simplify the complexity of managing multiple SAN-attached storage devices.

Productivity Manager for Disk is designed to enable the IT administrator to:

- *Enable proactive performance management by provide an IT administrator with a single, integrated console for the performance management of IBM System Storage devices.*
- *Monitor performance metrics across multiple storage subsystems from a single console.*
- *Designed to allow administrators to monitor metrics, such as I/O rates and cache utilization, and support optimization of storage through the identification of the best LUNs across multiple storage subsystems.*
- *Monitor and analyze performance statistics for storage systems to measure services levels by storing received performance statistics into database tables for later use, and analyze and generate reports on monitored devices for display in central administrative console.*
- *Receive timely alerts to enable event action based on customer policies by setting performance thresholds for the devices based on performance metrics and the generation of alerts when those thresholds are exceeded.*

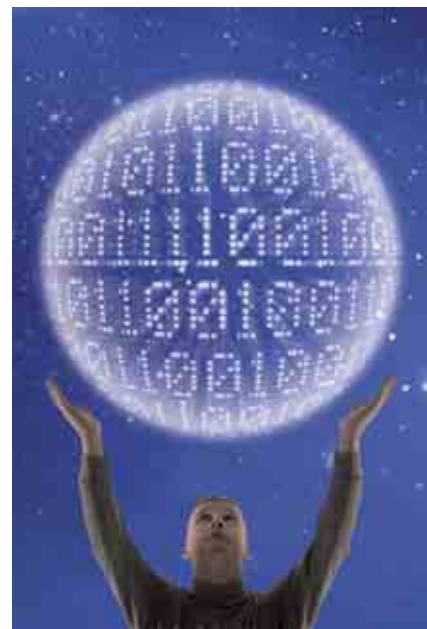
Productivity Center for Replication

IBM TotalStorage Productivity Center for Replication is designed to help simplify copy services management for IBM System Storage DS6000, DS8000 and IBM TotalStorage ESS. IBM TotalStorage Productivity Center for Replication is designed to provide configuration and management of the IBM copy services like FlashCopy®, synchronous Metro Mirror and asynchronous Global Mirror capabilities.

Data replication is a core function required for data protection and disaster recovery. The Productivity Center for Replication is designed to control and monitor copy services operations in storage environments. It also provides advanced copy services functions for supported storage subsystems on the SAN.

Productivity Center for Replication is designed to help an IT administrator to:

- *Keep data on multiple related volumes consistent across storage subsystems*



- *Perform freeze-and-go functions with consistency on multiple pairs when an error occurs during a replication operation*
- *Take advantage of configuration assistance and automate the source-to-target pairing setup, as well as monitoring and tracking the replication operations*
- *Automate the mapping of source volumes to target volumes, allowing a group of source volumes to be automatically mapped to a pool of target volumes.*

Productivity Center Basic Edition

Productivity Center Basic Edition is focused on providing basic device management services for IBM System Storage DS4000, DS6000 & DS8000 products, IBM SAN Volume Controller and heterogeneous storage environments. Productivity Center Basic Edition is a management option available with IBM TotalStorage hardware acquisitions. This tool provides storage administrators a simple way to conduct device management for multiple storage arrays and SAN fabric components from a single integrated console that also is the base of operations for the IBM TotalStorage Productivity Center suite. Productivity Center Basic Edition also does discovery and asset management of tape libraries, specifically IBM 3494 and 3584 Tape Libraries.

Productivity Center Basic Edition provides:

- *Discovery and configuration of supported devices*
- *Event gathering, error logging, and launch of device element managers*
- *Provisioning support, including LUN allocation and assignment*



- *Basic Asset and Capacity Reporting*
- *A Topology viewer—End to End Storage Topology View and Health Console*
- *An simple upgrade path to IBM TotalStorage Productivity Center for Disk, Data or Fabric*

Enabling Information on Demand and IT Service Management

IBM TotalStorage Productivity Center is a foundation platform that helps customers manage their corporate information strategies. As a key operations management application that provides

storage infrastructure management, IBM TotalStorage Productivity Center enables Information on Demand by helping customers classify storage, manage storage service levels and reduce the cost of storage over time. IBM TotalStorage Productivity Center is also a crucial platform for IBM Tivoli IT Service Management, helping customers with both storage service support and service delivery.

For more information

Contact your IBM representative or
IBM Business Partner or visit:

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