IBM Tivoli Storage Productivity Center

Simplify, automate and optimize management of your storage infrastructure

Highlights

- Provide comprehensive visibility and control with centralized management of your heterogeneous storage environment from a single management interface, using role-based administration and single sign-on

- Deliver common services for simple 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 of storage area network (SAN) fabric

- Easily create and integrate IBM Cognos®-based custom reports on capacity and performance

IBM Tivoli® Storage Productivity Center can help you manage performance, availability and capacity utilization of your multivendor storage systems. It performs device configuration and management of multiple devices from a single user interface, and helps tune and proactively manage the performance of storage devices on the SAN while managing, monitoring and controlling your SAN fabric.

The mission: Improve storage infrastructure management and time to value

As the amount of data you need to store and retain grows exponentially, you must find better ways to control the cost of storage. In addition, managing storage infrastructure has become increasingly complex as businesses continue to acquire new storage infrastructures or inherit a mix of multivendor storage assets due to acquisitions or company mergers. You need to 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 Infrastructure Library (ITIL) and data retention requirements.

Both requirements—managing storage infrastructure and the data that resides there—are highly labor intensive. Tivoli Storage Productivity Center is a storage infrastructure management tool that is easy to deploy and use, and can help you reduce the complexity of managing your storage environments by centralizing, simplifying and automating storage tasks associated with storage systems, storage networks, replication services and capacity management.

Tivoli Storage Productivity Center is designed to help control and reduce total cost of ownership by:

• Improving storage performance
• Reducing administrative costs through centralized management of heterogeneous storage
• Significantly reducing planned downtime
• Configuring storage systems the best-practices way
• Reducing backup and restore costs
• Simplifying overall IT operations

The solution: IBM Tivoli Storage Productivity Center

Tivoli Storage Productivity Center is a comprehensive, end-to-end storage infrastructure management software solution that provides an easy-to-use, next-generation user interface to monitor, report and manage storage capacity, storage networks, storage systems and replication services.

The Tivoli Storage Productivity Center family of products includes Tivoli Storage Productivity Center and Tivoli Storage Productivity Center Select.

Tivoli Storage Productivity Center provides a single point of control for you to manage every aspect of your storage network, between the hosts, through the fabric, to the physical disks in a multi-site storage environment. Tivoli Storage Productivity Center is designed to provide the foundation for storage ser-vice-level management by offering storage system and SAN performance and availability management.

Heterogeneous storage environment management

Tivoli Storage Productivity Center provides device-level, inte-grated storage infrastructure management capabilities for man-aging both IBM System Storage® products and other vendors' storage systems. It is by design that Tivoli Storage Productivity

The fully-integrated, web-based user interface

Center provides comprehensive device, capacity, availability and performance management features for IBM platforms, as well as significant capabilities for managing multivendor storage systems. It has advanced, native integration for IBM System Storage DS8000®, IBM Storwize® V7000, IBM System Storage SAN Volume Controller and IBM XIV® Storage System. Two key areas of focus are performance management of storage systems and storage networking platforms, and capacity and operational management of IBM and heteroge-neous storage systems. Tivoli Storage Productivity Center can help storage administrators more efficiently manage large and complex heterogeneous storage environments by simplifying day-to-day operations, reducing management complexities and improving system availability.

Tivoli Storage Productivity Center can help with faster problem determination and resolution to reduce downtimes. Advanced disaster recovery capabilities allow you to plan for replication while storage is being provisioned, ensuring data protection and business continuity.

IBM storage systems support includes operational control and performance reporting of XIV Storage System, System Storage Enterprise Storage Server® Models 800 and F20, System Storage DS3000, DS5000 and DS8000, Storwize V7000 and SAN Volume Controller.

Heterogeneous storage support is offered via the Storage Networking Industry Association's Storage Management Initiative Specification Versions 1.0.2 and 1.1 (or later). Management capabilities include operational control, as well as provisioning of heterogeneous storage platforms, including storage devices from HDS, HP, EMC, NetApp, LSI and Engenio. Tivoli Storage Productivity Center also provides performance reporting at the port and switch levels for platforms from Brocade Communications and Cisco Systems.

Simplified management for storage efficiency and reduced costs

As a management option, Tivoli Storage Productivity Center is available with IBM System Storage hardware acquisitions. This tool provides storage administrators a simple way to conduct device and performance management for multiple storage arrays and SAN fabric components—from a single integrated administrative console.

Tivoli Storage Productivity Center provides:

- Web-based management console
- Reporting and analytical capabilities
- Device management
- SAN fabric management
- Replication services management

Tivoli Storage Productivity Center also offers an easy upgrade to IBM SmartCloud™ Virtual Storage Center—which is designed to help create private storage clouds.

Tivoli Storage Productivity Center provides a fully integrated, web-based user interface that is designed to greatly improve the user experience. Through its centralized user interface, Tivoli Storage Productivity Center enables a number of storage infrastructure management tasks, including:

- Monitoring the infrastructure, accessing health at a glance and creating logs
- Planning for problem areas and performance trends
- Configuration by providing allocation, zoning and masking
- Reporting capacity, utilization and performance statistics

- Providing problem determination, that is, aggregated status, drill down, identification of impacted resources and recommendations to fix the problem
- Enabling disaster recovery by simplifying advanced copy services (replication) tasks on IBM storage devices

Web-based user interface

Tivoli Storage Productivity Center features a fully integrated, web-based user interface that simplifies the way you view and manage your storage infrastructure. The navigation is built around the tasks needed to manage a storage environment. It provides rapid visibility and access to the information you need to effectively manage your storage environment. However, the legacy user interface from earlier product versions is still available with all supported functions.

Key benefits of the web-based user interface include:

- Simplified, icon-based navigation
- Breadcrumb trail for location awareness
- Uncluttered workspace that highlights resources and their health
- Links to internal and external resources at a single location
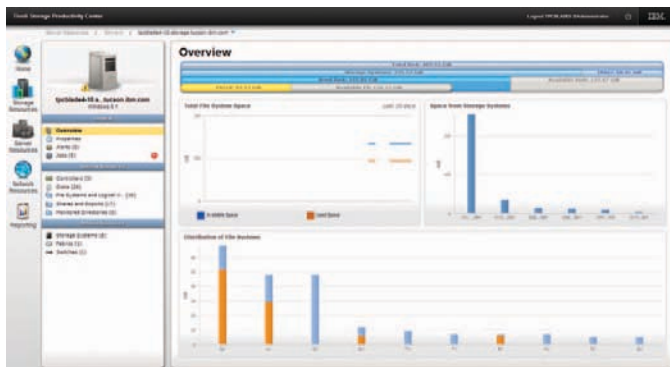
Server overview highlighting file system utilization and distribution

Reporting and analytical capabilities

Tivoli Storage Productivity Center offers improved reporting and analytical capabilities through its integration with IBM Cognos Business Intelligence reporting and modeling. Data abstraction and ad-hoc reporting enables you to create high-quality reports and charts, and provides out-of-the-box reporting capabilities for quicker time to value.

Key benefits of Cognos-based reporting capabilities include:

- Simplified report creation and customization
- Quicker time to value with out-of-the-box reports
- Intuitive drag-and-drop function for rapid reports
- Easy drill-up and drill-down functions for both reporting and charting
- Reports on schedule and/or on demand in multiple distribution formats
- Enhanced visibility into performance to help users make the right decisions

Device management

Tivoli Storage Productivity Center helps monitor and manage performance and measure service levels by storing received performance statistics into database tables for future use. Policy-based automation enables event action based on business policies. Tivoli Storage Productivity Center sets performance thresholds for the devices based on selected performance metrics, generating alerts when those thresholds are exceeded. These capabilities help Tivoli Storage Productivity Center simplify the complex management of multiple SAN-attached storage devices.

Tivoli Storage Productivity Manager device management capabilities include:

- Proactive performance management from a single, integrated console for monitoring storage devices
- Monitoring metrics, such as I/O rates and cache utilization, and supporting storage optimization through the identification of the best logical unit numbers (LUNs) across multiple storage subsystems
- Measuring and tracking service levels by storing historical performance statistics for analysis and generation of reports
- Generating timely alerts that can enable event action by setting performance thresholds based on business policies

In addition, Tivoli Storage Productivity Manager improves storage return on investment by keeping SANs operating reliably and dependably; reduces storage administration costs by simplifying the management of complex SANs; and provides comprehensive monitoring and fault identification to improve SAN availability.

SAN fabric management

Tivoli Storage Productivity Center supports multivendor SANs and includes automatic resource and topology discovery, monitoring and alerts, zone control and SAN error prediction capabilities. An autonomic computing capability, SAN Error Predictor, is designed to help predict SAN network outages before they become severe and impact data and application availability. This functionality incorporates predictive failure analysis into the storage network environment that allows administrators to be more proactive in ensuring SAN availability. Tivoli Storage Productivity Center diagnostic capabilities show which resources are impacted by an availability or performance issue in the SAN.

Tivoli Storage Productivity Center SAN fabric management capabilities include:

- Automated device discovery, topology rendering and zone control for SANs
- Simplified management and improved availability of the SAN environment
- Multiple SAN views, including physical, logical and zone
- SAN Error Predictor, which proactively ensures high availability of data and applications
- Diagnostic capabilities that pinpoint resources impacted by an availability or performance issue
- Performance monitoring at the port and switch level
- Enterprise scalability that enables upgrading from SAN islands to enterprise SANs

Replication services management

Data replication is a core function required for data protection and disaster recovery, and Tivoli Storage Productivity Center is designed to meet this requirement through control and monitoring of copy services operations in storage environments. It supports hundreds of replication sessions across thousands of volumes, supporting both open and IBM z/OS® attached volumes. It helps monitor performance of all copy session types and reports on the amount of data exposed at the disaster recovery site (not in synchronization with the source site).

Tivoli Storage Productivity Center provides configuration and management of IBM copy services such as IBM FlashCopy®, Metro Mirror, Metro/Global Mirror and multiple Global Mirror sessions.

Tivoli Storage Productivity Center for Replication service management capabilities include:

- Planning for replication while provisioning storage devices
- Keeping data on multiple related volumes consistent across storage subsystems
- Automating actions to ensure consistency across multiple source pairs in the event of a disaster
- Taking advantage of configuration assistance and automating the source-to-target pairing setup, as well as monitoring and tracking replication operations
- Automating the mapping of source volumes to target volumes, allowing a group of source volumes to be automatically mapped to a pool of target volumes
- Reducing downtime of critical applications with quick and easy steps to recover to a remote site
- Providing high availability for applications through the use of IBM HyperSwap® technology

- Easily managing and monitoring multi-site solutions to meet disaster recovery requirements
- Enabling information on demand and IT service management
- Providing the ability to practice recovery processes while still maintaining disaster recovery capabilities
- Adding site awareness to the environment to ensure correct site-to-site replication mapping
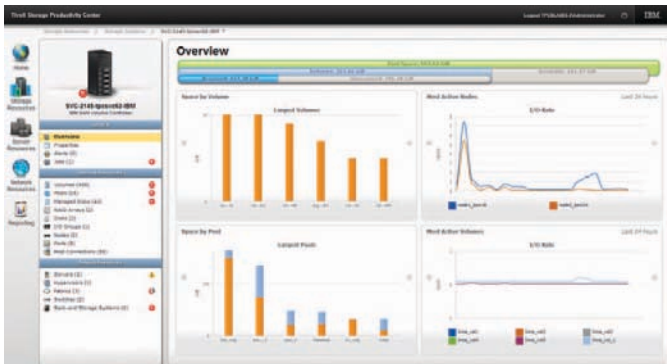
Overview of SAN Volume Controller highlighting activity by nodes and volumes

Tivoli Storage Productivity Center integration with IBM Tivoli System Automation enables a single point of control for both multi-tiered business applications and the corresponding data replication between two sites. This integration offers the following capabilities:

• End-to-end recovery of applications across heterogeneous and virtual environments
• Automatic start, stop and move of tiered applications
• Integrated monitoring and control of storage hardware replication sessions
• Lower-priority business application shut down in order to keep higher-priority business applications running

Tivoli Storage Productivity Center Select

Tivoli Storage Productivity Center Select is an entry-level offering that provides the equivalent functionality to Tivoli Storage Productivity Center, but is designed to license by the number of storage devices managed. It supports Storwize V7000, XIV and System Storage DS3000, DS4000 and DS5000 as standalone devices or attached to a SAN Volume Controller. Tivoli Storage Productivity Center Select also supports any storage devices that are attached to Storwize V7000.

Why IBM?

Tivoli Storage Productivity Center is a foundational platform that provides visibility, control and automation to effectively manage your storage environment. As a key operations management application that provides storage infrastructure management, Tivoli Storage Productivity Center enables information on demand by helping customers classify storage, manage storage service levels and reduce the total cost of storage over time. Tivoli Storage Productivity Center is also a crucial platform for IBM Tivoli Integrated Service Management, helping customers with both storage service support and service delivery.

For more information

To learn more about the IBM Tivoli Storage Productivity Center or IBM Tivoli Storage Productivity Center Select, please contact your IBM representative or IBM Business Partner, or visit: **ibm.com**/storage/software/center

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