

Hitachi HiCommand® QoS for File Servers Software

Integrating file-level storage resource management capabilities with active SAN management, Hitachi HiCommand® QoS for File Servers software delivers a comprehensive capacity, performance, and user-consumption management solution for file servers, whether hosted on DAS, NAS, or SAN.

HiCommand QoS for File Servers—End-to-end File Server Storage Management

In a networked storage environment, monitoring file server free space, identifying over-quota users, and reclaiming unused capacity can be time-consuming due to the sheer volume of files and data involved. HiCommand QoS for File Servers software scales to handle traditional file scanning and reporting tasks in heterogeneous storage environments, which may scan large volumes with millions of files, without impacting network performance. It also can help to answer some key questions about your file storage environment, such as: Which files haven't been accessed in a long time? What file extensions are taking up the most space? Which users or groups are using the most space? How much file server capacity is being used or is available?

By auto-discovering file servers, the storage infrastructure, and their interdependencies, QoS for File Servers software can collect and monitor a wide range of file-level demographics to provide complete capacity management for your file servers. QoS for File Servers software allows administrators to drill down from file server performance and availability issues to the underlying cause in the storage infrastructure and issue alerts when storage infrastructure changes impact your file server environment.

Business Benefits

Ensure Application Availability

- Determine the cause of unplanned downtime quickly with real-time monitoring of the entire file server infrastructure.
- Plan maintenance downtime with minimal impact on users.
- Resolve issues before outages occur.

Ensure Capacity Requirements

- Provide faster root-cause analysis for capacity issues to avoid out-of-space conditions.
- Act on real-time alerts when file server free space drops below specified levels.
- Forecast future capacity requirements with historical capacity trends.

Improve Administrative Efficiency

- Report effectively and recover space even in high-volume environments that overwhelm less-scalable tools.

Reduce Operational and Capital Costs

- Ensure existing storage investments are protected with broad support for multivendor storage environments utilizing industry standards.
- Identify unused or wasted storage capacity that can be reallocated or reclaimed to defer additional capital investments.

Feature Highlights

Auto-discovery and Topology Rendering

- Renders the path automatically, from file servers through host bus adapters and SAN switches to the disk storage systems, for end-to-end file server storage management.
- Employs visualization features to zoom in and out from file servers to individual device details, providing an inclusive picture of your file server infrastructure.

End-to-end Capacity Management

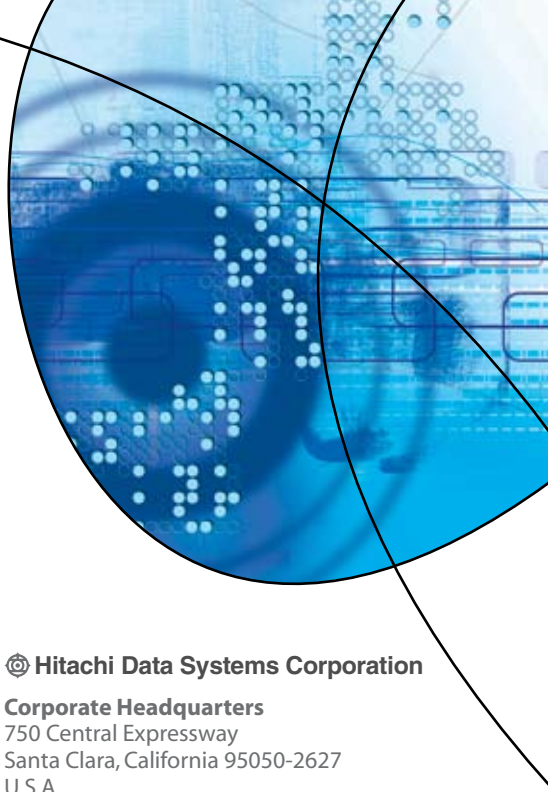
- Examines free-space alerts and reports to determine which file servers and underlying physical storage resources are at risk of running out of capacity.

Application Optimized Storage™ Solutions Enable File Server Management Throughout the Storage Infrastructure

To Hitachi Data Systems and members of the Hitachi TrueNorth™ Channel Partner Program, Application Optimized Storage™ solutions mean you can do more than store your data securely. By using HiCommand QoS for File Servers software in your network, you can work efficiently to deliver the required quality of service from your file storage infrastructure while reducing capital expenditures—another example of how these solutions optimize storage capabilities to support business operations.

Complementary Solutions

- HiCommand QoS for Oracle software
- HiCommand Chargeback software
- HiCommand Path Provisioning software
- HiCommand Storage Services Manager for NetApp software
- HiCommand Device Manager software



- Assesses user-consumption reports and flexible file-level reports that illustrate which file types are consuming the most capacity and enables appropriate actions.
- Reclaims capacity by using policy-based automation capabilities to execute commands or run scripts or programs to delete, migrate, or archive files by file type.
- Supplies new capacity automatically with the end-to-end provisioning features to ensure continued file server availability.

Real-time Performance Management

- Determines which logical and physical elements in the storage stack are impacting file server performance and availability through real-time infrastructure performance monitoring.
- Forecasts performance demands via extrapolated historical performance trends.

File-level Reporting and Drill Down

- Provides out-of-the-box reports covering a wide range of file-level demographics and allows you to customize them with a range of attributes, including file type, file age, and file owner.
- Produces high-level reports of aggregated information, such as the number of files and the space consumed by all TMP files, and then drills down to view, and even base an action upon, the fully qualified name of every file that makes up the report.

Policy-based Automation

- Customizes file storage resource management operations to optimize file scans and reporting for specific environments.
- Ensures continued file server infrastructure availability via threshold events and rules that trigger e-mail, pager alerts, command or external program execution, or provisioning of new capacity.

Scalability and Network Performance

- Enables effective space recovery and renders complete and accurate usage reports via the highly scalable host-staging repository, capable of tracking millions of files.
- Improves performance by reducing network traffic required to return file scan metadata to the HiCommand Storage Services Manager application server, and enables round-trip scans to complete quickly through an ultra-efficient, patent-pending algorithm.

Prerequisites

HiCommand Storage Services Manager Software

HiCommand Storage Services Manager software is the main Hitachi console for HiCommand standards-based, heterogeneous storage infrastructure management solutions. Built on the SMI-S industry standard, it ensures broad support for multivendor storage environments that protect investments in both storage hardware and management solutions. As the base platform upon which QoS for File Servers software builds, Storage Services Manager software allows enterprises to optimize heterogeneous storage infrastructures to meet business objectives and manage storage as an application-focused utility.

System Requirements and Support Matrix

For a complete list of system requirements and supported hardware/software platforms, please visit: <http://www.hds.com/go/hicommandrequirements>

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