Hitachi Tuning Manager software provides integrated performance analytics within Hitachi Command Suite for advanced performance management of Hitachi virtualized storage environments.

**Integrated Storage Performance Analytics**

**Storage Performance Challenges**

Storage resource management practices can be labor intensive and inefficient when it comes to accurately monitoring storage performance, identifying bottlenecks and forecasting capacity requirements. Storage administrators typically receive reports of application performance issues, which need to be quickly analyzed and diagnosed if storage is at fault. Without efficient and continuous monitoring, storage performance could impact business productivity and place the most important corporate asset — information — at risk.

**The Solution**

Hitachi Tuning Manager software is an integrated storage performance management solution that maps, monitors and analyzes performance of network resources from the application through to the logical storage devices. It monitors all storage network resources, including hosts, file systems, databases, SAN switches and Hitachi storage systems. Tuning Manager provides the necessary visibility for performance optimization and management of the entire storage environment required for today’s data centers.

Hitachi Tuning Manager enables integrated storage performance analytics within Hitachi Command Suite to quickly identify, isolate, and find possible causes of performance bottlenecks. Within the Command Suite central management console, the integrated analytics capabilities provide the necessary 1st step to quickly address performance issues associated with Hitachi virtualized storage environments.

Complementing the integrated Hitachi Command Suite performance analytics, Hitachi Tuning Manager also includes a web-based interface to provide deeper monitoring across a comprehensive range of performance and capacity metrics. Tuning Manager provides both predefined and custom reporting capabilities. Performance reports include statistics that can be trended over time to ensure the performance needs of mission-critical applications are being met. They can also facilitate the forecasting of future storage requirements based on actual usage patterns.

Tuning Manager software seamlessly integrates with key business applications, such as Oracle, IBM® DB2®, Microsoft SQL Server and Microsoft Exchange, and it fully operates within virtual server environments, such as VMware. As the performance foundation of Command Suite, Tuning Manager helps to properly optimize and manage the performance of Hitachi storage environments to both maximize storage utilization and reduce ongoing operating costs.

**Business Benefits**

**Boost Business Agility, Manage Growth**

- Provides rapid problem identification and isolation of storage performance problems through integrated Hitachi Command Suite performance analytics
- Monitors storage performance proactively; provides alerts of potential issues before failures can occur
- Enables complex resource analysis by properly mapping applications, hosts and storage resources
Supports faster application deployment through accurate planning and forecasting of required storage resources

Enable Operational Excellence
- Ensures business application performance by properly monitoring resources from the application through to the storage logical devices
- Delivers automated alerts when utilization and/or performance exceed critical or predefined thresholds
- Allows proper planning for storage performance: reviews historical trends; quickly identifies source of bottlenecks
- Improves utilization and planning of Hitachi Dynamic Provisioning and Hitachi Dynamic Tiering storage pools

Reduce Operational Costs
- Empowers personnel to make informed storage performance decisions
- Eliminates storage capacity overruns
- Improves the storage planning processes for better allocation of existing storage resources
- Enables more effective use of administrative resources through efficient monitoring and troubleshooting

End-to-end Storage Performance Management
- Provides mapping of all storage network resources on the application’s data path: applications, databases, host servers, virtual servers, virtual machines, paths, switches, storage ports, parity groups and logical storage devices
- Provides in-depth performance metrics and analysis of Hitachi storage systems
- Monitors application and storage system response times and latencies
- Monitors SAN fabric performance
- Supports VMware ESX operating system environments

Storage Performance and Capacity Planning
- Monitors and reports on detailed storage capacity and performance metrics
- Enables storage requirement analysis and planning from the business application perspective
- Provides advanced reporting of Hitachi Dynamic Provisioning and Hitachi Dynamic Tiering storage pools
- Employs multilevel capacity and performance alerts for proactive management
- Generates both predefined and easily customizable storage performance reports

Hitachi Command Suite Integration
- Supports all Hitachi storage systems and virtualized storage infrastructures
- Integrates storage performance analytics within Hitachi Command Suite for performance first aid to quickly identify and diagnose storage performance bottlenecks
- Integrates with Hitachi Command Director for business-oriented application storage views and monitoring of storage service level objectives