Automatically Tune Your Mainframe Storage System for Maximum Efficiency

Ongoing rapid growth of data storage capacity requirements and storage performance demands increasingly challenge today’s companies. Hitachi Dynamic Provisioning for Mainframe software eases these concerns by providing mainframe access to advanced Dynamic Provisioning storage performance and capacity management capabilities.

Dynamic Provisioning for Mainframe complements existing mainframe storage provisioning processes while improving performance and simplifying performance and capacity optimization. It also offers new storage reclamation options. By automatically spreading application data sets across large numbers of physical disks, the software automatically optimizes performance and throughput and reduces performance management concerns. Support is transparent to the mainframe system, and no configuration changes (for example, IBM® GDPS® parameters, IBM XRC sessions, IBM FlashCopy® configurations) are required. Dynamic Provisioning for Mainframe is the foundation for Hitachi Virtual Storage Platform (VSP) and Virtual Storage Platform G1000 family (VSP G1000 family) support for online dynamic volume expansion (DVE). It complements the new, larger VSP and VSP G1000 family extended address volumes (EAV) capability.

In tiered storage environments where application quality of service requirements are matched to storage assets, Dynamic Provisioning offers a full range of high-performance and low-cost tier options. The software supports both internal and externally attached heterogeneous storage, and it is fully compatible with Hitachi replication products on VSP and VSP G1000 family.

With the use of Dynamic Provisioning, unused capacity can be reclaimed, storage utilization rates improve and the entire storage system is tuned for maximum efficiency. Coupled with the advanced features and reliability of Hitachi storage systems, Dynamic Provisioning offers reduced capital and management expenses and an improved return on storage investment.

Benefits

Simplify Storage Performance Optimization

- Effectively combines application I/O patterns and spreads I/O activity across available physical resources; eliminates challenges of manually spreading an application over many spindles and predicting unused capacity.

COMPLEMENTARY SOFTWARE SOLUTIONS

- Hitachi ShadowImage for Mainframe software.
- Hitachi Universal Replicator for Mainframe software.
- Hitachi TrueCopy for Mainframe software.
- Hitachi Compatible Mirroring for IBM® FlashCopy®, software and services.
- Hitachi Business Continuity Manager software for mainframe.

Hitachi Data Systems Global Solution Services (GSS) can also help you address your mainframe data and storage needs through various planning and implementation services for mainframe environments.
I/O patterns that will cause contention and performance bottlenecks.
- Increases available spindle counts; adds performance horsepower.
- Automatically optimizes aggregate throughput to deliver the best performance.

Reduce Storage Acquisition Costs
- Optimizes storage capacity by only allocating capacity when it is used.
- Allows unused storage to be reclaimed, deferring future purchases; supports “host initiated reclaim,” based on the operating system’s “erase on scratch” option, which can reclaim unused space from previously allocated storage.
- Improves storage utilization; provides savings in space, power and cooling requirements.

Advanced Mainframe Feature Support
- Employs larger volume definitions by using EAV.
- Leverages DVE to seamlessly grow physical and logical capacity.
- Simplifies capacity expansion; requires neither IOGEN nor documentation updates.

Compatible Replication Capabilities
- Offers compatibility with all Hitachi replication products on Hitachi Virtual Storage Platform and Hitachi Virtual Storage Platform G1000 family.
- Further enhances cost benefits in replication environments where savings from thin provisioning are multiplied; enables savings gains in replication space, in bandwidth, since only occupied portions of volumes are replicated, and in replication license fees, which only apply to the occupied space.

HITACHI DYNAMIC PROVISIONING FOR MAINFRAME

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Compatible Replication Capabilities
- RAID Levels Supported: RAID-5 and RAID-6
- Disk Types Supported: All disk types supported by platform
- Virtual Volume Emulation: 3390-A
- Maximum Virtual Volume Capacity: 218GB = 262,668 cylinders
- Maximum Number of Thin Provisioned Volumes: Around 64K
- Maximum Pool Capacity: 696TB = Internal Only; 928TB = External Only
- Number of Pools per Storage System: 1 to 1024
- Host Initiated Reclaim: Supported
- Zero Page Reclaim and “Write Same” Support: N/A
- Dynamic Volume Expansion: Supported
- Automatic Pool Rebalance after Expansion: Supported
- Alerts: SIM, email and SNMP traps