



Using Storage Virtualization

to Meet the Challenges of Rapid Data Growth

GTSI's Data Management Solution Powered by Hitachi Data Systems

In 2009, Gartner reported that enterprise data needs will grow 650% over the next 5 years, making it more difficult and expensive for companies to maintain their data. In the past, companies managed growth by adding capacity; today, that decision is much more complex. Today's data must be managed. Data center consolidation, green initiatives, regulatory compliance mandates, search solutions, data mobility, high availability, disaster recovery and COOP are key drivers that must be addressed by the business.

Technologies such as Thin provisioning, de-duplication, and automated storage tiering can reduce costs and ensure compliance capability. GTSI has incorporated those technologies and more into a scalable virtualization solution called the GTSI Data Management Solution. Designed to simplify storage infrastructure, reduce cost, manage risk, and dramatically improve storage utilization up to 80%, our solution manages all storage assets and storage requirements via a single management interface.

Top Business Drivers for Storage Virtualization

- Data center consolidation
- Green initiatives
- Growing need for archive and search solution
- Data mobility & migration (non-disruptive service)
- Tech refresh
- Need for high availability
- Replication (DR/Coop)
- Need for increased storage utilization

Leveraging Existing Assets, Reducing Costs, and Simplifying Storage Management

The Problem: Exponential Data Growth

For businesses around the world, data volume is growing exponentially. Each day, companies gather and store more information to meet business and regulatory requirements. It all adds up to exploding data growth—and persistent storage problems.

Historically, smaller and midsized organizations have met the data challenge simply by buying additional servers with attached disk storage. Larger organizations have deployed storage area networks (SANs) and started to propagate their data centers with monolithic dedicated storage systems. While this stopgap approach solves immediate storage needs, it just delays the long-term solution. It leaves you with islands of storage, each dedicated to different applications. When you continually add storage devices, you increase data management complexity and drive up capital and operations costs.

For most businesses, this legacy IT strategy is not only costly, it's unsustainable. Clearly, a new approach is needed. That new approach is storage virtualization. Storage virtualization allows you to meet the challenge of exponential data growth in a manner that reduces operational costs, improves efficiency, gives you an expanded choice of hardware vendors and extends the life of your existing storage assets.

When it comes to helping you achieve these goals, GTSI's Data Management Solution (DMS) is perfectly suited to address these business needs.

Setting the Standard for Storage Virtualization

GTSI's DMS sets the industry standard for storage virtualization, with virtualization solutions and services that help make more efficient use of your available resources and substantially lower the amount of storage and storage networking hardware you have to buy. By providing one platform for all of your data and eliminating barriers to sharing storage capacity among different vendors' hardware and various storage tiers, we help you achieve sustainable long-term savings on the cost of storage management and defer the purchase of new storage assets.

GTSI's DMS provides true heterogeneous data migration, replication and management services through a storage-controller-based virtualization approach, regardless of the manufacturer of the storage system.

Our approach to storage virtualization places the intelligence in the storage controller and separates it from the commodity disk components.

Controller-based virtualization permits heterogeneous storage resources that are both internal and external to appear as a single consolidated pool of storage. Controller-based virtualization masks the underlying complexity and provides a common integrated platform for architecting a multitiered intelligent storage solution.

GTIS's DMS Delivers

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 "The Federal Government will transform its IT infrastructure by virtualizing data centers, consolidating data centers and operations, and ultimately adopting a cloud computing business model."

(GSA, 2009)

Virtualization Innovation without Disruption

How can storage virtualization solutions from GTSI help your organization? Here are some of the benefits DMS customers are realizing today.

Increased Utilization

Most data centers have a heterogeneous storage environment with low storage utilization, multiple user interfaces, and various software applications for management and replication. The DMS offers virtualization solutions that help you simplify your storage infrastructure and dramatically improve storage utilization by managing all storage assets as a single pool via a single management interface.

The DMS enables you to allocate virtual disk storage based on your anticipated future needs without having to dedicate physical disk storage up front. If the need for additional physical disk arises, you can purchase capacity at a later time. Implementation occurs transparently, without disruption to your mission-critical applications.

When you consolidate storage into a single virtual pool, deploy thin provisioning with Hitachi Dynamic Provisioning software, and tier the storage devices, you put your organization on a path to higher utilization. Just how much higher? With the GTSI DMS you can drive utilization rates upwards of 85 percent, far exceeding the industry averages of 35%.

Support for Tiered Storage

Tiered storage provides an architecture that allows you to provision capacity based on a business application's sensitivity to price, demand for quality of service and requirements for advanced storage functionality.

These are among the benefits of tiered storage solutions from GTSI . They enable the nondisruptive movement of data volumes to match application-driven price, performance and availability characteristics through an easy-to-use interface.

You can now match application service level needs to your storage infrastructure. This helps you make the most effective use of available heterogeneous storage assets.

Metered Services

GTSI's DMS virtualization solutions allow storage administrators to allocate

the costs of storage to the lines of business and the applications that use the resources. With these solutions in place, your IT organization can create a utility model to deliver "metered" storage resources to the business. This enables transparency of chargebacks for virtual and physical storage, cache and network assets. Virtual storage systems can be managed centrally or by local administrators.

In addition, the intelligent architecture of Services Oriented Storage Solutions from GTSI's DMS unleashes a services-oriented approach. You gain specific functionality that allows storage administrators to tailor storage services to business needs and ensure that business units only pay for what is actually used.

Reduced Total Cost of Ownership

GTSI's DMS storage virtualization solutions help you consolidate more data on less hardware, significantly lowering long-term infrastructure costs. This gain is made possible by the ability of the GTSI DMS to virtualize heterogeneous storage devices, extending the life of existing storage assets and reducing the cost of additional storage capacity when eventually required.

Storage virtualization can put real dollars back into your IT budgets. These savings are made possible with improvements in capacity utilization, reduced costs for storage software licenses, support and training, and reduced management time.

Simplified Management

By centralizing and simplifying management and control of multivendor storage environments with one

management console and a single set of management tools, GTSI's DMS reduces the complexity of heterogeneous storage infrastructures. The GTSI DMS virtualization technology allows you to present a consistent interface to business and storage management applications, dramatically simplifying storage provisioning and management.

In addition, GTSI's DMS virtualization capabilities allow seamless ongoing data migration, as needed, for best use of your storage resources—regardless of vendor or source and target storage systems.

An Eco-friendly Solution

At a broader level, GTSI's DMS storage virtualization helps you address mounting environmental concerns over increased electrical power consumption, data center cooling needs, and floor space requirements.

Let's Get Started

Storage virtualization is a practical and effective way to manage the increasing complexity of data and growing demands for high availability storage. With the right solutions in place, storage virtualization can help you respond to exponential data growth in a manner that cuts operational costs, improves efficiency, and increases returns on your investments.

GTSI is ideally positioned to help you achieve these goals. The DMS approach to virtualization is unique and unmatched in the industry. No one knows storage virtualization as well as GTSI .

ABOUT GTSI

Celebrating over 25 years of technology leadership in government

Since 1983, GTSI has provided technology products, professional services, and IT infrastructure solutions to Federal, state, and local government. Our deep knowledge of government technology environments, policies, purchasing requirements, and business objectives is matched by our numerous contracts and extensive staff of certified engineers and project managers. As a result, GTSI has been able to help agencies meet the infrastructure demands and performance requirements of technology-enabled government from program inception to end-of-life.

GTSI employs Technology Lifecycle Management (TLM) as a framework for government agencies to align the acquisition, deployment, management, support, refresh, and disposal of technology to business objectives and budgets. This strategic, multi-phased methodology enables GTSI to help agencies realize the full benefit of their technology infrastructures.

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About GTSI

GTSI Corp. is the first information technology solutions provider offering a Technology Lifecycle Management (TLM) approach to IT infrastructure solutions delivered through industry-leading professional and financial services. GTSI employs a proactive, strategic methodology that streamlines technology lifecycle management, from initial assessment to acquisition, implementation, refresh, and disposal. TLM allows government agencies to implement solutions of national and local significance quickly and cost-effectively. GTSI's certified engineers and project managers leverage strategic partnerships with technology innovators. These experts use proven, repeatable processes to design, deploy, manage, and support simple to complex solutions, to meet governments' current and future requirements and business objectives. GTSI is headquartered in Northern Virginia, outside of Washington, D.C.

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