

# Build your scalable storage environment upon a dynamic IBM Storwize family foundation

*The IBM Storwize family helps deliver what you need from storage – and less*



## Storage growth is unavoidable – but how to handle it can be less certain

When it comes to data growth and storage, entry level doesn't stay small for long and can become huge before you know it. Storage requirements and technologies are changing as well. Business needs for efficiency and cost control, for example, have made automation and data reduction more common – and more important – than ever before.

The combined needs for capacity and functionality also have increased the importance of selecting the right storage platform. But organisations are not always in agreement about how to proceed. One recent IBM® study found that while 71 percent of chief executive officers (CEOs) see technology change as the most important influence on their organisations, 78 percent of chief financial officers (CFOs) face ongoing pressure to control costs and increase efficiency.<sup>1</sup>

In other words, many organisations are torn between transforming their infrastructure to transform their business and putting on the brakes to spend money cautiously. So they end up putting most of their resources into operating and maintaining the assets they already have. Another IBM study concluded that while the most effective data centres (DC) allocate 50 percent or more of their IT budgets to new projects, only one in five organisations actually does so.<sup>2</sup>

This is hardly a recipe for success for any IT organisation. Especially for storage, where data growth comes from external as well as internal sources – and can result in massive volumes, largely beyond the organisation's control – change is unavoidable. You cannot keep up by simply maintaining current assets. Before you know it, technology can actually be a drag on the business, rather than the enabler it is intended to be.

## IBM gives you the right combination to meet storage needs

What, then, is the best way to grow your storage infrastructure? One option is simply to add storage capacity as the need arises, selecting systems from vendors and technologies available at the

time without a long-term plan. While this approach can meet your immediate storage needs, it can also lead to an unnecessarily complex heterogeneous infrastructure and severe management headaches down the road.

A better approach is to deploy a storage solution that can grow with your business without requiring you to change platforms or train your storage administrators to learn new systems. One that can deliver comprehensive capabilities more efficiently. One that can enable you to dedicate fewer of your scarce resources to IT infrastructure – and more to implementing new applications to support your business.

The IBM Storwize family gives you the right combination of more and less to meet the needs of data and storage growth – while minimising budgets and resources. Five times more data stored in the same space.<sup>3</sup> Three times the performance with the addition of only five percent flash storage.<sup>4</sup> Forty-seven percent less management effort. Thirty percent lower storage growth.

With the Storwize family, you get sophisticated capabilities that are proven, efficient and dependable. Storwize family systems come in a range of offerings designed to meet the differing needs of organisations – but they're all built on a common platform. Shared technologies and common management features mean the Storwize family is the right system to choose today for use tomorrow, as your storage requirements grow.

## The IBM Storwize family builds on a leading-edge foundation

IBM has long been one of the market leaders in storage innovation, dating from the introduction of the first magnetic tape unit in 1952. In recent years, it has led the way with storage virtualisation through IBM System Storage SAN Volume Controller (SVC), which combines hardware and software into an integrated solution.

Designed to deliver the benefits of enterprise-class storage virtualisation to large and small organisations alike, SVC provides a single point of control to support improved application availability and greater resource utilisation.

Using this software as a foundation, the Storwize family delivers these enterprise-class performance and functional capabilities through a range of flexible and scalable storage systems designed to support rapidly growing data and storage needs.

Beginning with entry-level storage systems and extending through midrange block and unified storage systems, virtualisation and enterprise-level systems integrated with IBM PureFlex System or IBM Flex System infrastructures, the Storwize family delivers innovative built-in capabilities that are ready to use from day one. These comprehensive systems are designed to deliver more of the capabilities you need from your storage – with less of the expense and inefficiency you can do without.

#### *Entry storage system*

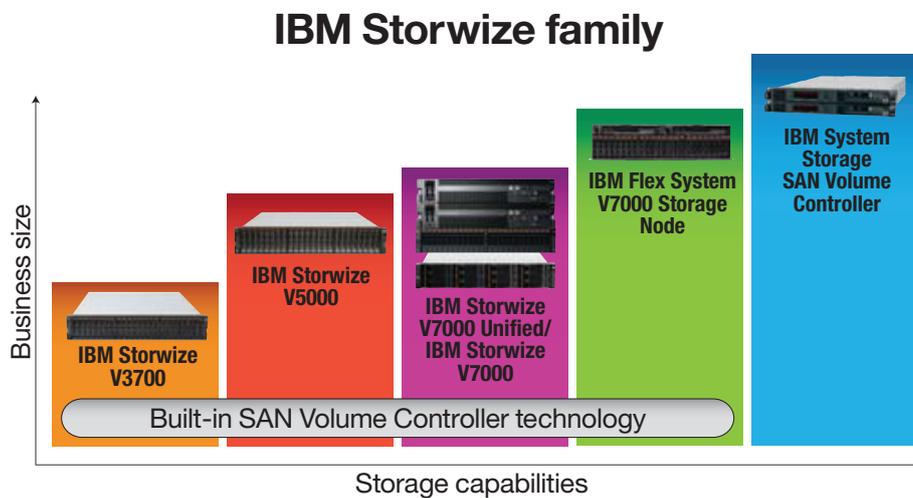
- **IBM Storwize V3700:** Easy-to-use, efficient and affordable entry storage system designed to address the growing data requirements and infrastructure consolidation needs of small and midsize businesses (SMB) with sophisticated capabilities unusual for a system of this class

#### *Midrange, highly flexible storage system*

- **IBM Storwize V5000:** Highly flexible, easy to use, virtualised storage system that enables midsize organisations to overcome their storage challenges with advanced functionality

#### *Midrange, block and unified storage systems*

- **IBM Storwize V7000 and IBM Storwize V7000 Unified:** Highly scalable midrange, virtualised storage systems designed to consolidate workloads into a single system for simplicity of management, reduced cost, superb performance and high availability (HA)



#### **Storage virtualisation system**

- **IBM System Storage SVC:** Leading-edge storage virtualisation system that enhances existing storage to help improve productivity and availability as it helps reduce cost

#### **Integrated storage systems**

- **IBM Flex System V7000 Storage Node:** Powerful storage system designed to enable rapid storage deployment and management simplicity through integration with compute, storage, networking, virtualisation and management functions for IBM PureSystems infrastructures

### **Core capabilities deliver consistent results across the Storwize family**

As an integral component of IBM Smarter Storage for Smarter Computing offerings, the Storwize family provides solutions that embody important core characteristics. Each Storwize offering provides system management that is intuitive and easy to use, with tightly integrated technologies that enable data to consume less space. Storwize family systems have built-in capabilities that analyse data-access patterns and then automatically adapt to improve performance. Each offers anywhere, anytime data availability that makes storage an enabler of transformation.

Plus, ongoing enhancements to the Storwize family software platform mean that the systems can deliver even greater efficiencies, with built-in intelligence, embedded analytics and the flexibility necessary to support cloud deployments. Storwize family systems are designed to deliver ‘five nines’ (99.999 percent) availability – which translates to an average annual downtime of less than five minutes. Storwize family systems can be ideal components for organisations’ mission-critical applications. Data can be mirrored between production and disaster-recovery (DR) sites in almost real time to provide a highly effective DR plan.

---

*“... managing an IBM Storwize [family] system with its management interface is 47 percent less time-consuming and 31 percent less complex...”<sup>5</sup>*

– Edison Group

---

Significantly, the Storwize family gives you a way to quickly and flexibly deploy virtualised storage to keep pace with the growth of virtual servers. Storwize family technologies enable you to extend virtualisation to your existing storage capacity. The result? You only need to buy as much storage as you require today – because both the performance and capacity of your Storwize family systems can scale as your business grows tomorrow.

### **Organisations of all sizes can leverage key IBM storage technologies**

Today’s massive volumes of increasingly valuable data demand increasingly effective storage. Innovative IBM technologies built into Storwize family systems provide capabilities that organisations of all sizes – from entry-level to enterprise – need to meet their storage challenges.

#### **Intuitive interface**

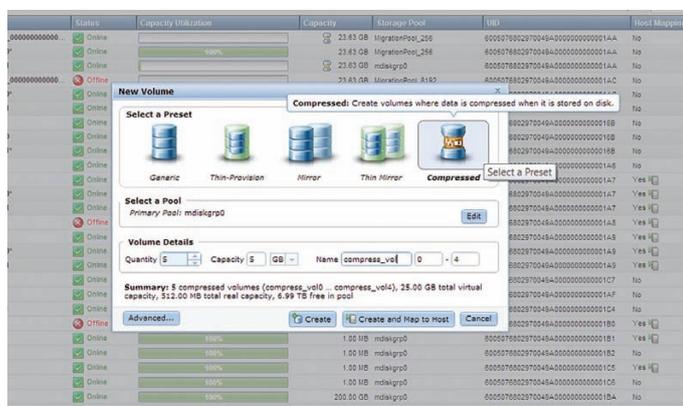
- Provides management via an easy-to-use graphical user interface (GUI)
- Reduces the time required for training storage administrators through built-in education and consistent operation across the Storwize family
- Improves administrator productivity with streamlined, intuitive operations.

### High performance thin provisioning

- Helps administrators avoid the need to pre-allocate storage space, whether it is used or not; instead, storage is allocated only when data is written and applications consume only the storage they need
- Improves capacity utilisation across the infrastructure, even with the most demanding applications
- Enables organisations to avoid overprovisioning; they can purchase only the capacity they need when they need it
- Frees administrators from tedious provisioning tasks so they can focus on more strategic goals.

### IBM Real-time Compression<sup>6</sup>

- Enables storing more data on less disk space – up to five times more data
- Operates with active primary data without introducing application performance degradation, which enables greater benefits than with other solutions
- Allows organisations to meet their storage needs while buying and maintaining less capacity.



An intuitive interface simplifies management. In this case, the administrator simply selects a new volume preset to enable Real-time Compression.

### IBM Easy Tier

- Automatically moves the most frequently used data to flash storage
- Improves performance by as much as three times with as little as five percent flash storage
- Requires no administrator intervention.

### External storage virtualisation<sup>7</sup>

- Makes capacity from existing storage systems part of the Storwize system, reducing purchase costs, enhancing value and extending the lives of assets
- Makes all the rich functions of the Storwize system available to virtualised storage, including high performance thin provisioning, Real-time Compression and Easy Tier
- Moves data transparently between external storage and Storwize systems
- Provides a single user interface to manage all storage, regardless of vendor.

### Remote mirroring

- Enables creating copies of data at a second location for use should a catastrophic event occur at a DC
- Supports replication between any members of the Storwize family; for maximum flexibility, can include any supported virtualised storage
- Supports Fibre Channel (FC), Fibre Channel over Ethernet (FCoE) and IP (Ethernet) networking between sites
- Uses innovative Bridgeworks SANSlide technology to optimise use of network bandwidth.

## With the Storwize family, your storage can grow with your business needs

With a foundation in leading-edge virtualisation capabilities from IBM, the Storwize family provides easy-to-deploy systems that enable organisations of all sizes to quickly and automatically adapt to today's complex and rapidly changing business conditions.

Storwize family value is delivered in storage systems designed specifically for different types of client environments, with the flexibility to scale capacity and performance as needed.

## Why IBM?

The Storwize family of products from one of the storage industry leaders; IBM is known for providing efficiency and high performance storage for any type of workload. IBM System Storage offerings customised for small, midsized and large organisations are specifically designed to deliver performance in streamlined packages that are easy to buy, deploy and manage.

## For more information

To learn more about the IBM Storwize family, please contact your IBM representative or IBM Business Partner (BP), or visit: [ibm.com/storwize](http://ibm.com/storwize)

Additionally, IBM Global Financing (IGF) can help you acquire the IT solutions that your business needs in the most cost-effective and strategic way possible. We will partner with credit-qualified clients to customise an IT financing solution to suit your business goals, enable effective cash management and improve your total cost of ownership (TCO). IGF is your smartest choice to fund critical IT investments and propel your business forward. For more information, visit:

[ibm.com/financing/uk](http://ibm.com/financing/uk)

<sup>1</sup> IBM Institute for Business Value, "Leading Through Connections: Insights from the Global Chief Executive Officer Study," *IBM Corp.*, Somers, NY, May 2012.

<sup>2</sup> IBM Global Technology Services, "Data centre operational efficiency best practices," *IBM Corp.*, Somers, NY, April 2012.

<sup>3</sup> IBM laboratory measurements – April 2012.

<sup>4</sup> IBM laboratory measurements – August 2010.

<sup>5</sup> Edison Group, "Competitive Management Cost Study: IBM Storwize V7000 vs. EMC VNX5500 Storage Systems," New York, April 2012.

<sup>6</sup> This feature does not apply to IBM Storwize V3700 and IBM Storwize V5000.

<sup>7</sup> This feature does not apply to IBM Storwize V3700.



---

### IBM United Kingdom Limited

PO Box 41  
North Harbour  
Portsmouth  
Hampshire  
PO6 3AU  
United Kingdom

### IBM Ireland Limited

Oldbrook House  
24-32 Pembroke Road  
Dublin 4

IBM Ireland Limited registered in Ireland under company number 16226. The IBM home page can be found at [ibm.com](http://ibm.com)

IBM, the IBM logo, [ibm.com](http://ibm.com), Easy Tier, Flex System, PureFlex, Real-time Compression and Storwize are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both. If these and other IBM trademarked terms are marked on their first occurrence in this information with a trademark symbol (® or ™), these symbols indicate U.S. registered or common law trademarks owned by IBM at the time this information was published. Such trademarks may also be registered or common law trademarks in other countries.

A current list of IBM trademarks is available on the Web at 'Copyright and trademark information' at [ibm.com/legal/copytrade.shtml](http://ibm.com/legal/copytrade.shtml)

Other company, product and service names may be trademarks, or service marks of others.

References in this publication to IBM products, programs or services do not imply that IBM intends to make these available in all countries in which IBM operates.

Any reference to an IBM product, program or service is not intended to imply that only IBM products, programs or services may be used. Any functionally equivalent product, program or service may be used instead.

IBM hardware products are manufactured from new parts, or new and used parts. In some cases, the hardware product may not be new and may have been previously installed. Regardless, IBM warranty terms apply.

This publication is for general guidance only. Information is subject to change without notice. Please contact your local IBM sales office or reseller for latest information on IBM products and services.

This publication contains non-IBM Internet addresses. IBM is not responsible for information found at these Web sites.

IBM does not provide legal, accounting or audit advice or represent or warrant that its products or services ensure compliance with laws. Clients are responsible for compliance with applicable securities laws and regulations, including national laws and regulations.

Photographs may show design models.

© Copyright IBM Corporation 2013



Please Recycle