



Highlights

- Meet changing business needs with virtualized, enterprise-class, flash-optimized modular storage
 - Deliver excellent performance with an all-flash solution
 - Easily order and quickly deploy all-flash storage with easy-to-use management tools
 - Transform the economics of data storage with hardware-accelerated data compression that lowers overall flash costs
 - Save space and power with a compact 2U form factor
 - Extend advanced functionality to virtualized external storage
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IBM Storwize all-flash storage systems

High performance with cost-effective solutions

Today's organizations need to meet ever-changing demands for storage while also improving data economics. IT staff must deliver more services faster and more efficiently, enable real-time insight and support more customer interaction. All-flash storage can meet these requirements for fast, reliable and consistent access to data, and the technology is now accessible to more businesses than ever.

IBM® Storwize® family offers the new IBM Storwize V7000F and IBM Storwize V5000F systems as all-flash, virtualized, enterprise-class storage systems designed to deliver the high performance needed to derive real-time insights from business data combined with advanced management functions. These all-flash solutions address the need to handle the massive volumes of data created by today's demanding cloud, analytics and traditional applications.

Built with IBM Spectrum Virtualize™ software, Storwize V7000F and Storwize V5000F provide the latest storage technologies for unlocking the business value of stored data, including virtualization, IBM Real-time Compression™, thin provisioning, snapshots, cloning, replication and high-availability configurations. They are designed to deliver outstanding performance, efficiency, ease of use and dependability for organizations of all sizes.



High performance

The all-flash Storwize solutions deliver both high performance and dramatically improved data economics. They help accelerate multiple workloads for faster decision making with best-of-breed performance. The solutions are most often deployed to support high-performance enterprise applications, such as databases like IBM DB2®, Oracle and SAP, as well as virtual desktop infrastructure (VDI) and server virtualization.

Efficiency

IBM Spectrum Virtualize software is designed to deliver extraordinary levels of efficiency, helping to revolutionize data economics and drive down costs for cloud, analytics, virtual server and other enterprise-class deployments. As a result, organizations no longer have to choose between performance and efficiency. They can get both within a single storage solution.

IBM Real-time Compression with hardware acceleration, available in Storwize V7000F, enables the system to deliver higher performance for compressed data than traditional systems offer for uncompressed data, enabling its use for practically all data types.¹ It is designed to enable storing up to five times as much data in the same physical drive space by compressing data as much as 80 percent.² The benefits include reduced acquisition cost (because less hardware is required), reduced rack space, and lower power and cooling costs throughout the lifetime of the system. And, when combined with external data virtualization, Real-time Compression can significantly enhance the usable capacity of existing storage systems, extending their useful life even further.

When replicating block data for business continuity, Storwize V7000F and Storwize V5000F can use IP network connections for simplicity and lower cost. Integrated Bridgeworks SANrockIT technology helps improve network utilization up to three times compared with traditional approaches,³ which can help reduce networking costs as well as accelerate replication cycles.

Data virtualization

IBM Spectrum Virtualize data virtualization technology helps insulate applications from physical storage. This enables applications to run without disruption, even when changes are made to the storage infrastructure.

Storwize V7000F and Storwize V5000F also extend data virtualization to other storage systems. When virtualized, data in a disk system becomes part of the Storwize system, and it can be managed in the same way as internal drives. Data in external disk systems inherits all the Storwize functional richness and ease-of-use features, including advanced replication, high-performance thin provisioning, data migration and Real-time Compression. Virtualizing external storage helps improve administrator productivity and boost storage utilization while also enhancing and extending the value of existing storage investments.

Moving data is one of the most common causes of planned downtime. Data virtualization enables moving data from existing storage into the new system or between arrays, while maintaining access to the data. This function might be used when replacing older storage with newer storage, as part of load-balancing work or when moving data in a tiered storage infrastructure from disk drives to flash.

Data virtualization can improve efficiency and business value. Nondisruptive migration can speed time-to-value from weeks or months to days, minimize downtime for migration, eliminate the cost of add-on migration tools, and may help avoid penalties and additional maintenance charges for lease extensions. The result can be real cost savings for your business.

Ease of use

Storwize V7000F and Storwize V5000F are designed to be easy to use from the very start. An intuitive management interface enables administrators to easily manage the solution. In fact, a comparative study found that tasks are almost half as time-consuming as managing a competitor's system.⁴

IBM Spectrum Control™, based on IBM Tivoli® Storage Productivity Center, can also provide organizations with an end-to-end view of storage health, long-term performance analytics and capacity statistics for Storwize V7000F, Storwize V5000F and the surrounding storage infrastructure.

What's more, IBM Spectrum Virtualize technologies—including Real-time Compression and IP replication with Bridgeworks SANrockIT technology—operate automatically and require little or no customization.

Dependability

Storwize V7000F and Storwize V5000F are part of the proven IBM Storwize family, with more than 90,000 enclosures and 2 exabytes of capacity deployed in organizations worldwide.

With their virtualized storage design and tight affinity with IBM PowerVM®, OpenStack, Microsoft ODX, VMware vSphere v6 and VMware vSphere Virtual Volumes (VVOL), Storwize V7000F and Storwize V5000F are an ideal complement for virtualized servers that are at the heart of cloud deployments.

Choosing Storwize all-flash storage

How do you know which Storwize all-flash storage solution is right for you? Options include:

- **IBM Storwize V7000F:** All-flash, highly scalable, virtualized, enterprise-class storage system designed to consolidate workloads into a single system for ease of management, reduced costs, superior performance and high availability
- **IBM Storwize V5000F:** All-flash (for smaller configurations), highly flexible, easy-to-use, virtualized storage system designed to overcome midsized organizations' storage challenges with superior performance and advanced functionality

ISV support

IBM is committed to continuous improvement and virtually seamless application integration to optimize your business results and minimize time-to-value. Our commitment is visible through ongoing work and enduring partnerships with independent software vendors (ISVs) such as Microsoft, Oracle, SAP, Symantec and VMware.

Combining Storwize systems with leading ISV applications can provide increased flexibility and deliver a more robust information infrastructure for your business. Solutions have been qualified for Storwize systems for select applications that focus on key areas including backup/restore, high availability, server virtualization, and database and performance optimization. IBM is also committed to certifications with key ISVs aligned with various industries including healthcare, financial services, telecommunications and the public sector.

Why IBM?

The Storwize family of products from IBM, a recognized leader in the storage industry, is known for providing efficiency, flexibility and high-performance storage for any type of workload. IBM storage offerings customized for small, midsized and large organizations are specifically designed to deliver performance in streamlined packages that are easy to buy, deploy and manage.

For more information

To learn more about IBM Storwize all-flash storage systems, please contact your IBM representative or IBM Business Partner, or visit: ibm.com/storwize

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Actual available storage capacity may be reported for both uncompressed and compressed data and will vary and may be less than stated.

¹ IBM lab measurements — April 2014

² IBM lab measurements — April 2012

³ IBM lab measurements — September 2013

⁴ Edison Group, “Competitive Management Cost Study: IBM Storwize V7000 vs. EMC VNX5500 Storage Systems,” April 2012.
http://www.lighthousecs.com/_resources/common/userfiles/file/V7000.pdf



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