

# IBM Storwize family: Ideal for VMware environments

*Efficient, high-performing virtualized storage for businesses of all sizes*



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## Highlights

- Optimize storage efficiency for VMware vSphere environments with a rich set of features that include storage virtualization, data compression and thin provisioning
  - Improve performance and consolidation capabilities with VAAI support that offloads I/O-intensive storage operations
  - Leverage built-in IBM FlashCopy technology for data protection, application testing and virtual machine cloning
  - Simplify management and improve administration with an intuitive, easy-to-use interface
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Many businesses have deployed or are considering VMware virtualization solutions in order to reduce costs with server consolidation, and increase the efficiency, utilization and flexibility of their existing IT infrastructure. However, to realize all of the benefits associated with server virtualization also requires a complementary and robust shared storage foundation. IBM has smarter storage solutions for businesses of all sizes that help optimize VMware infrastructure while also addressing the ongoing explosion of data.

## Raising the bar with the IBM Storwize family

Based on an architecture proven in thousands of deployments, the IBM® Storwize® family delivers powerful, affordable and efficient storage that is designed to address growing data requirements and consolidation needs. The Storwize family raises the standard by incorporating a rich set of features to help deploy, manage and administer IT environments, and can ultimately help address the storage challenges related to the ongoing information explosion.

The Storwize family includes entry to enterprise-level storage systems that are designed to support growing business requirements. Key IBM Smarter Storage capabilities include storage virtualization, built-in solid state drive (SSD) optimization, thin-provisioning, clustering, data compression, replication services, multi-protocol support and a common, advanced administration interface. The Storwize family offerings are optimized for rapidly growing workloads and can help organizations flexibly and economically keep pace with business requirements.

## Built-in storage efficiencies

The efficiency features included with Storwize family can deliver significant benefits for VMware environments and mixed workloads. Like server virtualization, storage virtualization can boost asset utilization while optimizing expenditures and capabilities. Thin provisioning leverages virtualization technology, enabling applications to consume only the space they actually use, not the total space that has been allocated to them. Higher utilization can be realized by reducing the need to install physical disk capacity that would otherwise be unused. Dynamic migration is also included with the Storwize family, and enables non-disruptive data movement to the system for consolidation efforts or when upgrading



to new technology. And IBM Real-time Compression™ can enable storing as much as five times more active primary data in the same physical disk space to improve efficiency and control costs.<sup>1</sup>

## VAAI integration improves performance

Through integrated support for vSphere Storage APIs for Array Integration (VAAI), the Storwize family can improve performance and consolidation capabilities. When VAAI is enabled, vSphere can execute operations faster and consume fewer server resources and storage bandwidth. Processing for certain I/O-intensive operations like virtual machine cloning can be offloaded from VMware ESX hosts to Storwize family storage when utilizing VAAI, which eliminates redundant data flows between the physical server and storage. Reducing the workload on the server also allows more virtual machines to be deployed for consolidation purposes or growing business needs.

## Essential snapshot technology

The Storwize family includes a rich IBM FlashCopy® function that is designed to create an almost instant copy of active data, which then can be used for data protection purposes or parallel processing activities. FlashCopy can help you recover from situations where data has been lost because of application or user error. For example, FlashCopy can be used to take a snapshot of critical data at regular intervals before beginning any maintenance activity to protect against possible accidental deletion.

The ability to clone virtual machines is one major advantage that virtual machines have over physical servers. New systems can be quickly provisioned, or existing systems can be cloned for testing. vSphere can be used to create a clone; however, by using the FlashCopy capability built into the Storwize family instead of server resources, individual virtual machines or entire virtual environments can be quickly cloned. Using FlashCopy to create writeable snapshots or space-efficient copies can also boost performance for virtual desktop infrastructure (VDI) deployments.

## Easy to deploy and manage

The Storwize family has been designed for exceptional ease of use and includes a highly graphical and intuitive user interface. The initial system setup typically only takes minutes and volumes can be provisioned with only a few clicks. With this innovative interface that has been integrated across multiple IBM storage systems, IT departments can administer a storage system in almost half the time and with 30 percent less complexity when compared to EMC UniSphere.<sup>2</sup>

## The IBM-VMware relationship

As established leaders in virtualization, IBM and VMware are long-time partners with hundreds of thousands of successful deployments. IBM continues to be a VMware Global Alliance Partner and one of the largest OEMs of VMware software. Continued strong investment and active involvement in joint development initiatives and partner programs ensures that IBM solutions such as the Storwize family are supportable and designed with optimal performance and functionality in mind.

## For more information

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

For a list of high-quality solutions with our partner independent software vendors (ISVs), including access to solution briefs and white papers, visit:

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<sup>1</sup> IBM lab measurements – April 2012

<sup>2</sup> Edison Group, [Competitive Management Cost Study: IBM Storwize V7000 vs. EMC VNX5500 Storage Systems](#), April, 2012.



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