



IBM System Storage™ solutions for Microsoft technologies



In today's global economy, maintaining availability of mission-critical data and applications is a business necessity. Organizations require rapid access to information that is both easily accessible and secure. Such access can help you to make knowledgeable decisions that lead to growth and profitability. How can you take steps to keep information available — when and where you need it — to fuel innovation and growth?

IBM System Storage solutions for Microsoft IT environments can help you create or enhance an infrastructure that responds to changing business requirements while enabling data sharing and collaboration across your enterprise. As a leader in storage systems and solutions, IBM offers the innovative technology, support for open standards, and excellent performance that today's companies require. Our broad portfolio of storage offerings, along with our software, hardware and solutions offerings are backed by IBM's support and recognized leadership in e-business on demand.®

IBM System Storage: Uniquely designed for your Microsoft environment

IBM works closely with Microsoft to create storage systems for your Microsoft environment. IBM System Storage offerings support interoperability with Microsoft solutions for:

- Exchange Server 2003/2007
 - SQL Server 2000/2005/2008*
 - Windows Server 2000/2003/2008
 - Microsoft Office SharePoint Server 2007 (MOSS)
 - Data Protection Manager v2.0 (DPM)
 - Microsoft Office Communications Server (OCS) and Microsoft Hyper-V planned for 2H08.
- *At product RTM*

These solutions can help to address your information management needs, enabling you to improve your IT infrastructure, leverage your business data effectively to innovate and create value, mitigate IT risk, and enable business flexibility.

IBM works with Microsoft toward enabling storage solutions that support our mutual Windows customers through ongoing participation in the following Microsoft programs:

- Exchange Solution Review Program - Storage (ESRP-Storage)
- Simple SAN Program
- SQL Server 2005 'Always On' Program
- Failover Cluster Configuration Program (FCCP)
- Various Technology Adoption Programs (TAPs) and Proof of Concept trials (POCs)
- Enterprise Engineering Center (EEC)

Our ESRP-Storage submissions and Simple SAN solutions can help to complete SMB or enterprise IT implementations, using Microsoft

Highlights

- *Help support interoperability for your Microsoft environments and help improve your IT infrastructure with proven IBM System Storage solutions*
- *Address day-to-day challenges with cost-effective storage solutions for backup and recovery, e-mail, database, collaboration, and archiving*
- *Manage your growing business needs with continuous access to information through industry-leading virtualization and copy service capabilities*

best practices guidelines and frameworks. Participation in Microsoft's Technical Adoption Programs (TAPs) as well as the SQL Server 'Always On' programs help keep our technologies and solutions aligned early in the development process, so that IBM storage solutions are ready for deployment alongside new or upgraded Microsoft OS or application releases.

IBM interoperability with Microsoft

IBM and Microsoft share a focus on enabling interoperability between applications and platforms for enterprise and SMB customers. Together, the companies were founders of the WS-I consortium to promote XML Web services standards in the industry. This includes interoperability with a wide range of IBM technologies. For example, IBM's System Storage solutions are well-suited for solutions using IBM System x x86 server and IBM BladeCenter products for Microsoft environments.

IBM has worked with Microsoft to develop complementary storage solutions that can help Microsoft and IBM customers realize significant benefit from their investment. With the first vendor submission for Microsoft's ESRP-Storage program for Exchange 2007, IBM completed integrated testing and generated the first ESRP solution/sizing guide for Microsoft Exchange Server 2007 with IBM's System Storage DS4800 for an 8,000-user email environment. IBM continues to participate in the ESRP-Storage solution testing program. The ESRP-Storage program was developed by Microsoft Corporation to facilitate third-party storage testing and solution publishing for Microsoft Exchange Server 2003 and 2007 software.

IBM provides a complement of VSS Exchange and SQL backup and restore solutions as well. Microsoft developed VSS as a common framework to resolve snapshot issues generated by hardware and

software compatibility errors that were previously difficult to track and resolve. With VSS functionality available in Windows Server 2003 and 2008, IBM uses this common interface model to support the various versions of Microsoft files and applications.

IBM also verifies its solutions onsite in Redmond using IBM storage equipment and IBM personnel who help develop joint solutions, perform interoperability and technology validation testing, and produce collateral such as Technical Solution Guides (Redpapers) and performance and sizing guides.

Additionally, IBM makes IBM System Storage equipment available at Microsoft's Enterprise Engineering Center (EEC) for customer testing and Proof of Concepts (PoCs). The EEC hosts Microsoft and IBM customers who are testing and validating planned upgrades, migrations or deployments of Microsoft enterprise software and solutions. As part of the Windows Server Customer Focused Engineering group in the Windows Server Division, the EEC improves quality, drives capabilities, and accelerates the adoption of Microsoft products by capturing and testing real customer scenarios prior to product release. The EEC helps both IBM and Microsoft field account teams connect their customers directly with the product groups at Microsoft.

Get value from your information

Manage your growing business needs with an IT environment that can help you keep information available. IBM System Storage solutions for Microsoft support continuous access to information through IBM's SAN Volume Controller (SVC) virtualization solutions, as well as through IBM interoperable and cost-effective storage solutions. We can help protect your company's information assets with our comprehensive system storage solutions.

IBM System Storage products for Microsoft can help provide end-to-end disk storage and management, allowing organizations to address the growing challenges of managing information lifecycles. These products can help you create, organize and manage a storage environment that can better accommodate the explosive growth of data while simplifying administration and addressing rising costs. IBM System Storage disk and virtualization products and their relative positioning range from entry-level offerings to enterprise offerings. (See Table 1.)

Tested solutions: More than the sum of their parts

Every IT professional knows the intrinsic value of a tested, well-documented solution. After all, the most difficult processes in a project implementation usually center on correctly identifying the right technology to use, and from which vendors, followed by implementing them in a manner that is based upon knowledge and experience. IBM's Redbooks and Redpapers are among the most commonly accessed technical documents for helping customers select and implement the appropriate technology for their environment. These technical guides help take the 'guesswork' and uncertainty out of implementing solutions, since they provide real-world deployment information in a step-by-step manner.

Working together with Microsoft, IBM System x, IBM Tivoli, our partner ISVs, and customers, IBM identifies key Microsoft technology areas that apply most readily to storage solutions that can help improve Microsoft IT environments. IBM is focusing on the following solution areas:

- Exchange Server 2003 and 2007 backup and recovery using VSS technology
- Exchange Server 2003 and 2007 ESRP sizing, planning and performance

- Exchange Server 2007 HA implementation using in-box and array-based replication
- SQL Server 2005 and 2008* sizing, planning, and performance
- SQL Server 2005 and 2008* backup & recovery using Microsoft VSS technology
- SQL Server 2005 and 2008* HA implementations using in-box and array-based replication
- Data Protection Manager v2.0
- Simple SAN
- Microsoft Office SharePoint Server (MOSS) 2007 backup/recovery, and sizing guides
*At product RTM

Storage solutions for e-mail and database archiving

IBM provides storage solutions that help address today's customer challenges surrounding e-mail and database archiving.

Many organizations use Microsoft Exchange Server to deliver their mission-critical communication services. E-mail access is required 24x7 and volume is growing at an unprecedented rate, creating a sharp increase in storage capacity needs, administrative difficulties, and escalating infrastructure costs. Likewise, relational databases are at the core of most organizations' critical operations. Rapidly growing databases can impact productivity if the volume of data begins to degrade performance.

To cost-effectively manage your growing Microsoft Exchange environments, and to help you manage the growth of your database and potentially reduce its size while improving application performance and availability, take advantage of IBM storage systems to simplify and consolidate your infrastructure. These solutions include IBM's e-mail archiving solutions containing products from IBM server and storage product families, including both DS series family storage and N series family storage solutions.

Table 1: IBM System Storage™ Solutions for Microsoft (June 2008)
<http://www-03.ibm.com/systems/storage/solutions/isv/index.html#microsoft>

ESRP and other Microsoft Exchange Storage Solutions:

- IBM System Storage DS8300 80,000 Mailbox Local Continuous Replication Exchange 2007 Storage Solution
- IBM System Storage DS8100 24,000 Mailbox Exchange 2007 Solution Review Program (ESRP) Storage Solution
- IBM System Storage DS4500 Solution for Microsoft Exchange Server – Storage
- IBM System Storage DS4700 Express 8000 Mailbox Exchange Server 2007 Storage Solution
- IBM System Storage DS4800 8K–User Solution for Microsoft Exchange Server 2007 – Storage
- IBM System Storage DS4800 Exchange Server 2007 15,000 Mailbox Jetstress Analysis
- IBM DS4700 Express 8000 Mailbox Local Continuous Replication Exchange 2007 Storage Solution
- IBM System Storage DS4800 12000 Mailbox Exchange Server 2003 – Storage Solution
- IBM System Storage DS3200 2000 Mailbox Local Continuous Replication (LCR) Exchange 2007 Storage Solution
- IBM System Storage DS3300 2000 1GB Mailbox Exchange 2007 Solution Review Program (ESRP) Storage Solution
- DS4700 High Availability for Exchange 2007 LCR and SCR Solution Guide
- IBM System Storage TSM solution for Exchange Server 2003
- IBM System Storage SAN Volume Controller (SVC) 40,000 Mailbox with DS8100 and DS4800 Exchange 2007 Solution Review Program (ESRP)
- Hosted Microsoft Exchange Server 2003 Deployment Using IBM System Storage N series
- Microsoft Exchange Server 2007 and IBM System Storage N series with RAID–DP
- IBM System Storage N series and Microsoft Exchange Server 2007 Best Practices Guide
- Microsoft Exchange 2007 and IBM System Storage N series Disaster Recovery Solution
- Simplifying Microsoft Exchange Migration with IBM System Storage N series and Symantec Enterprise Vault
- Microsoft Exchange Server 2003 and IBM System Storage N series with SnapManager, SnapMirror and SnapRestore
- Microsoft Exchange and IBM System Storage N series with NearStore and Symantec Enterprise Vault
- Exchange Server 2003 on IBM System Storage N series
- IBM System Storage N series N3600 iSCSI 5,000-User Microsoft Exchange 2007 Storage Solution Best practices
- IBM System Storage N series N5600 FC 26,000-

User Microsoft Exchange 2007 Storage Solution Best practices

- IBM System Storage N series N5600 iSCSI 26,000-User Microsoft Exchange 2007 Storage Solution Best practices

- Microsoft Exchange 2007 Continuous Replication for N series Best Practices guide

SQL Server Solutions:

- SQL Server 2005 with IBM System Storage DS8000 & DS4000 Best Practices Guide
- SAP on Microsoft Windows and Microsoft SQL Server with IBM System Storage N series
- Microsoft SQL Server 2000/2005 and IBM System Storage N series
- Microsoft SQL Server and IBM System Storage N series with SnapDrive
- Microsoft Cluster Service and Microsoft SQL Server 2000 Virtual Server with IBM System Storage N series and SnapDrive
- Microsoft SQL Server 2000 and IBM System Storage N series with SnapMirror technology

DPM Solutions:

- Microsoft System Center Data Protection Manager & IBM Continuous Data Protection for Files
- Protecting Microsoft® Exchange Servers with IBM System Storage™ DS3000 series and Microsoft System Center Data Protection Manager 2007

VSS Backup and Restore Solutions:

- Exchange 2003 VSS Backup Solution for IBM System Storage DS8000/DS6000 and Symantec Backup Exec 11d – Configuration and Best Practices
- Exchange 2003 VSS–Based Backup/Restore Solution for IBM TotalStorage DS8000 and DS6000 Using Symantec NetBackup 6.0
- Exchange 2003 VSS Backup Solution for IBM System Storage DS4000 Series IBM Tivoli Storage Manager for Mail – Data Protection for Exchange

Other Microsoft Storage Solutions:

- IBM System Storage solutions for Microsoft technologies – Solutions Overview
- IBM TSM for Microsoft Office SharePoint Server 2007
- NetBackup 6.0 with Exchange Installation and Configuration Guidebook for Version 1.0
- Simplifying the SAN
- Continuous Application Availability: Server Clustering and the IBM DS3200 Storage Subsystem
- Integrating FileNet Image Services with IBM System Storage N Series Unified Storage for Microsoft Windows
- Integrating IBM System Storage N series into Microsoft Windows peer-to-peer workgroups
- Microsoft Cluster Services and IBM System Storage N series

Why IBM?

The performance and availability of your storage environment can enhance your business processes and improve your total cost of ownership. IBM can help you address the challenges that your storage network or company as a whole encounters. When considering who you will choose for your next storage investment, be sure to compare:

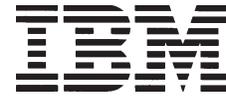
- the breadth of our storage software, hardware and solutions offerings
- our technology
- our relationship and commitment to Microsoft and supporting ISVs
- our IT service and support offerings
- our financing options
- our quality, reliability and dependability

What is the IBM advantage? You get some of the best storage products, technologies, services and solutions for your Microsoft environment.

For more information

For more information about IBM Storage Systems for Microsoft technologies, contact your IBM representative or visit the following Web sites:

IBM System Storage	http://www-03.ibm.com/systems/storage/
IBM System Storage Microsoft solution guides and White Papers	http://www-03.ibm.com/systems/storage/solutions/isv/index.html#microsoft
Microsoft Storage Partner Extranet	http://www.microsoftstoragepartners.com/
Microsoft ESRP v1.2 (Exchange Server 2003)	http://technet.microsoft.com/en-us/exchange/bb412165.aspx
Microsoft ESRP v2.0 (Exchange Server 2007)	http://technet.microsoft.com/en-us/exchange/bb412164.aspx
Microsoft Simple SAN	http://www.microsoft.com/windowsserversystem/storage/simplesan.mspx
SQL Server 2005 Always On	http://www.microsoft.com/sql/technologies/highavailability/default.mspx



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TSS03015-USEN-00