

# HP StorageWorks and ProLiant storage for Microsoft infrastructures

Flexible and turnkey data storage solutions for your Microsoft infrastructure



You need a way to keep up with your ever-growing storage needs. Together, HP, Microsoft and our partners have the answer.

You have better things to do than worry about file storage and retention. But you're faced with ever-increasing storage needs while your IT budget keeps getting smaller. You're juggling fractured installations, multiple management interfaces and shrinking backup windows—all while users still need to find, share, save and protect valuable information. You need flexible solutions that are powerful but easy to deploy and manage.

One way to start improving your efficiency is to leverage industry-standard HP ProLiant, HP BladeSystem and Microsoft® Windows® Storage Server 2003 R2 building blocks. HP StorageWorks uses these components in the HP ProLiant Storage Server and HP StorageWorks All-in-One (AiO) Storage System.

## Solution components

Enhance your business outcomes with industry-standard file serving, data consolidation and data protection solutions from Microsoft and HP StorageWorks solutions.

- HP ProLiant Storage Servers – the fast and easy way to add Windows-powered file/print services to your network, available as standalone systems or as gateway servers in front of a storage area network (SAN)
- HP StorageWorks All-in-One Storage System (AiO) – Windows-powered file/print services plus an entry level internet small computer system interface (iSCSI) storage array with integrated data protection and simple management

In addition to these systems, the HP StorageWorks portfolio includes dedicated storage arrays and multi-tier backup systems which include both disk and tape. Reduce risk, lower your costs and enable future growth with solutions that allow you to view storage as a resource to fuel your business. Storage is easy when you choose HP.



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## Solution context

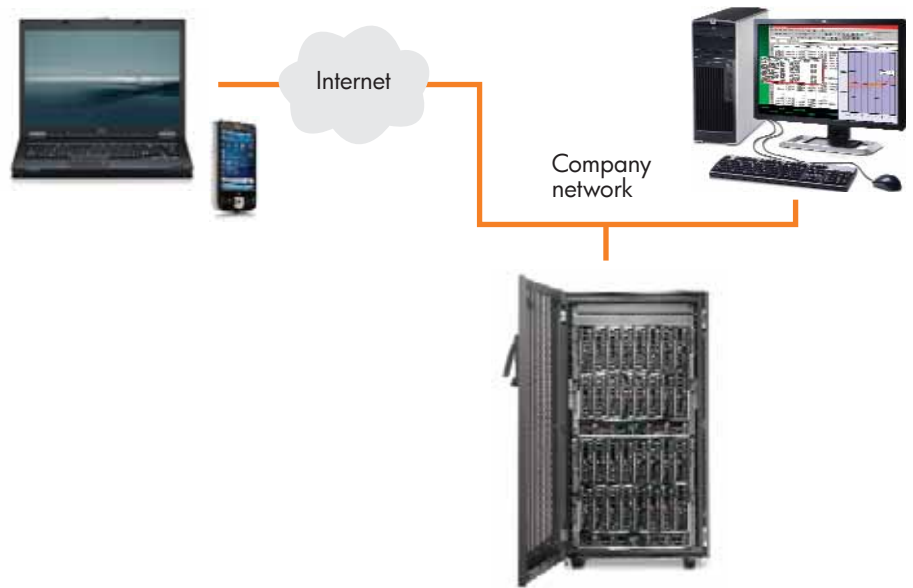
To design an HP data storage solution for your Microsoft infrastructure, it is important first to understand that infrastructure. This illustration depicts a simplified infrastructure which provides this context.

It is characterized by these basic components:

### Core infrastructure

- Servers (HP ProLiant and HP BladeSystem)
- Storage (HP StorageWorks disk and tape systems)
- Applications for file and print, mail and messaging, transaction processing, etc.
- Local and remote clients accessing data and applications

Based on your particular scenario, which deployment model is right? The answer lies primarily in the number of users and your data storage requirements.



Core server, storage and application infrastructure including HP StorageWorks All-in-One Storage and/or HP ProLiant Storage Servers

# Which deployment is right for your business?

- The HP ProLiant ML110 G5 Storage Server provides an affordable and turnkey file and print serving solution. Performance optimization and easy management make it an ideal solution for your growing business.
- The HP ProLiant ML110 G5 Server can be upgraded with the cost-effective HP Lights-Out 100c Remote Management card for remote sites or second offices.



### Network printers



UNIX®/Linux clients using NFS



NetWare clients using NCP



Windows clients using CIFS



HP ProLiant ML110 G5 Storage Server

A typical heterogeneous file serving environment

## Solution architecture

- Network attached storage – AiO1200 serves file data to clients via common internet file system (CIFS)/server message block (SMB) network file system (NFS).
- iSCSI storage area network – AiO1200 centralizes application data storage for servers.
- Data protection – Data is consolidated to disk on the HP StorageWorks 1200 All-in-One Storage System and then backed up to tape for long-term archival and offsite.



Ethernet public network connecting clients transmission control protocol (TCP)/internet protocol (IP)



**HP StorageWorks 1200 All-in-One Storage System**  
iSCSI SAN storage for application servers and file/print serving for clients

Ethernet storage network (iSCSI)

**HP ProLiant DL360 G5 Servers**

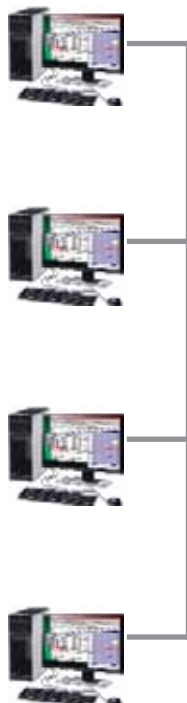
Application servers supporting messaging and database functions

**HP StorageWorks MSL2024 Tape Library**

Connected to the HP StorageWorks AiO1200

**HP All-in-One Storage System: optimized file serving, shared iSCSI SAN storage and integrated data protection**

- HP ProLiant Storage Servers allow you to add file storage to your enterprise, workgroup or small office IT environment quickly and manage it more easily with these flexible and intelligent Windows-powered network file storage solutions.
- HP StorageWorks 2000fc Modular Smart Array is an affordable way to consolidate storage into a highly available solution that can grow with your business.



**HP ProLiant DL380 G5 x64 SAN Storage Server**  
Running Windows Unified Data Storage Server 2003 R2

Fibre channel storage network

**HP StorageWorks 2000fc Modular Smart Array**

- Client file shares
- Microsoft Outlook personal storage file (PST) file archive
- Microsoft Exchange Server database

**HP ProLiant DL320 G5p Server**

Application server with Microsoft Exchange Server 2007

**Modular components to deliver unified network attached storage (NAS) and SAN storage**

## Solution highlights

### Powerful yet simple information storage

HP provides the broadest range of Windows-based network storage devices on the market today, combining industry-leading HP ProLiant and HP BladeSystem hardware and storage-tuned operating systems from Microsoft.

These solutions are up to 20 percent faster than general purpose server solutions and include deduplication features to improve space efficiency by up to 35 percent. In addition, because they are running a Microsoft operating system, they provide seamless integration into Windows environments and leverage of existing anti-virus, backup and management software.

HP ProLiant and HP BladeSystem-based systems like HP ProLiant Storage Server and HP StorageWorks All-in-One Storage Systems provide innovative features built on top of Microsoft Windows Storage Server:

- HP-enhanced File Server Management Console – with the familiar look and feel of the Microsoft Management Console (MMC)
- HP Systems Insight Manager (SIM) – monitoring and management of servers and storage, saving valuable time and resources
- Integrated Lights-Out (iLO) – total remote control of the storage server from almost anywhere at anytime
- Interoperability and support for replication and backup via HP StorageWorks Storage Mirroring and HP Data Protector Express software
- Support for Microsoft System Center Data Protection Manager 2007 (DPM) either as a protected system or as a dedicated DPM server

In addition to all of the features already listed, the HP All-in-One Storage System combines turnkey file serving HP StorageWorks capabilities with consolidated iSCSI storage for applications such as Microsoft SQL Server or Exchange Server. Other HP StorageWorks All-in-One Storage System features include:

- HP All-in-One Storage Manager (ASM) software to enable any IT generalist to benefit from network NAS and SAN storage without requiring storage expertise
- Integration with key applications like Microsoft Exchange and SQL Server provides iSCSI SAN setup, data migration and data protection in less than 10 mouse clicks
- Includes a full version of HP Data Protector Express backup software for backup to disk or tape, as well as a trial version of HP StorageWorks Storage Mirroring Software for replication

### HP/Microsoft Frontline Partnership

The HP/Microsoft Frontline Partnership is a long-term, strategic alliance and shared partner network, specifically dedicated to delivering optimized, reliable HP and Microsoft solutions ready to meet your business needs. Building on a strong foundation of shared technology and engineering, you can trust that HP backup and storage products provide reliable, powerful and highly secure solutions for your Microsoft implementations.

For more information, visit  
[www.hp.com/storage/microsoft](http://www.hp.com/storage/microsoft)

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4AA2-0002ENW, May 2008



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