

# HP StorageWorks File System Extender

Data sheet



HP StorageWorks File System Extender meets today's business need for cost-effective archive storage for massive amounts of data. This powerful solution provides automatic and transparent movement of data between production storage systems and secondary storage media according to business data availability demands and access requirements.

# HP StorageWorks File System Extender

HP StorageWorks File System Extender (FSE) belongs to the new generation of data management software solutions from the HP Information Lifecycle Management portfolio. Proven and tested, it is designed to be flexible, with a client/server architecture that can build a consolidated or distributed data management infrastructure. In both installations, the FSE client manages the migration of system file(s) between application/file servers, and the FSE server manages the secondary storage used for the file migration. Operation is automatic and transparent with a resulting increase in efficiency of data management and reduced storage costs.

Using the FSE client and based on business needs, rules are defined to identify files for migration from the production storage system to the secondary storage media. Typically, active data is maintained on high-performance product storage systems, while inactive data is moved to the lower cost secondary storage. For added flexibility, an FSE client-managed file system can also be optionally upgraded to a Write Once Read Many (WORM) file system. The FSE server controls the storage migration media for one or more FSE clients.

Improving on traditional data management products, FSE offers a single secondary storage layer made of multiple media types. This allows different policies and migration media to be used to meet the varying needs of individual users, departments, and even within an application itself. And unlike competing products, FSE supports Microsoft® Windows® and Linux® operating systems and can migrate files to a consolidated storage migration layer (FSE server) from either. And while traditional hierarchical storage management (HSM) products rely on WORM media such as optical or tape, FSE provides the benefits of WORM while utilizing non-WORM media such as an existing, or new, file system.

The HP StorageWorks File System Extender is the ideal data management solution for customers needing to manage large volumes of file system stored data where a significant portion of that data is inactive but must be kept available.

## Key features and benefits

- *Compatible:* Migrates files from Windows and Linux operating systems to a consolidated (Linux FSE server) storage migration layer
- *Upgradeable:* Has the capability to upgrade the file system to WORM
- *Manageable:* Includes file expiration policies to delete files after a user-configured time period
- *Efficient:* Uses event-based triggers to automatically migrate files off the production storage system(s), removing the need for file grooming from the storage administrator and consequently freeing up time for more value-add activities
- *Easy to use:* Enables the production storage systems to become leaner and more efficient because they only contain active data and files that the business need-based rules specify should be permanently online
- *Secure:* Protects data against loss and allows the storage administrator to configure multiple file copies to be made either in the same rack or data center or to media that is located remotely for added redundancy

**FSE server OS support**

Microsoft Windows Server 2003  
 Microsoft Windows Storage Server  
 SuSE Linux Enterprise Server 8.0  
 Red Hat Enterprise Linux 3.0

**FSE client OS support**

Microsoft Windows 2000 Server Service Pack 3 and newer  
 Microsoft Windows Server 2003  
 Microsoft Windows Storage Server  
 SuSE Linux Enterprise Server 8.0  
 Red Hat Enterprise Linux 3.0

**Minimum CPU and hardware requirements**

**FSE server (most installations)**

- HP ProLiant DL380 G4 server
  - 1 GB RAM (Add additional RAM depending upon requirements.)
  - 1 processor (Add a second processor depending upon requirements.)
  - RAID protected disks to hold operating system and FSE program files (RAID 1 recommended)
  - RAID protected disks to hold FSE databases (RAID 5 recommended)
  - RAID protected disks for disk buffer (or use of an external RAID system)
  - Ethernet network interface adapter card(s), 10/100/1000 Mbps as per HP ProLiant DL380 server QuickSpecs\* and as required by configuration
  - SCSI or Fibre Channel adapters as per HP ProLiant DL380 server QuickSpecs\* and as required to connect storage systems

**FSE server (high performance installations)**

- HP ProLiant DL580 G2 server
  - 2 GB RAM (Add additional RAM depending upon requirements.)
  - 2 processors (Add 2 more processors depending upon requirements.)
  - RAID protected disks to hold operating system and FSE program files (RAID 1 recommended)
  - RAID protected disks to hold FSE databases (RAID 5 recommended)
  - RAID protected disks for disk buffer (or use of an external RAID system)
  - Ethernet network interface adapter card(s), 10/100/1000 Mbps as per HP ProLiant DL580 server QuickSpecs\* and as required by configuration
  - SCSI or Fibre Channel adapters as per HP ProLiant DL580 server QuickSpecs\* and as required to connect storage systems

**FSE client (consolidated configuration)**

- FSE client runs on same machine as FSE server – see above.

**FSE client (distributed configuration)**

- FSE client runs on external machine to FSE server.
- RAID protected disks to hold FSE program files (RAID 1 recommended)
- RAID protected disks to hold FSE databases (RAID 5 recommended)

**Supported storage**

**FSE client (manages migrating file system(s))**

- Support for any storage that the operating system supports and can have a supported file system written to it

**FSE server (manages migration media)**

- Disk
  - HP StorageWorks Modular Smart Array 500 (SCSI disks)
  - HP StorageWorks Modular Smart Array 1000 (SCSI disks)
  - HP StorageWorks Modular Smart Array 1500cs (SCSI and SATA disks)
  - HP StorageWorks Enterprise Virtual Array 3000 (FATA and Fibre Channel disks)
  - HP StorageWorks Enterprise Virtual Array 5000 (FATA and Fibre Channel disks)
- Tape
  - HP StorageWorks MSL6000 tape library (LTO I, LTO II)
  - HP StorageWorks ESL9000 tape library (LTO I, LTO II)
  - HP StorageWorks E-Series tape library (LTO I, LTO II)

**What's included**

Software CD containing all installable software, documentation and source code of open source software used

\* HP ProLiant server QuickSpecs are located at: <http://h18004.www1.hp.com/products/servers/platforms/index-dl.html>.

## Ordering information

Part number	Product name	Product description
<b>Primary offerings</b>		
T3648A	Media kit for HP FSE clients and servers	Media kit contains all installable software, documentation and source code of open source software used.
T3649A	FSE client for Windows	FSE client for Windows Server 2000, Windows Server 2003, Windows Storage Server
T3651A	FSE client for Linux	FSE client for SUSE Linux 8.0 and Red Hat Enterprise Linux 3.0
T3653A	FSE server for Windows	FSE server for Windows Server 2003, Windows Storage Server; includes 1 TB of migrated file capacity
T3655A	FSE server for Linux	FSE server for SUSE Linux 8.0 and Red Hat Enterprise Linux 3.0; includes 1 TB of migrated file capacity
T3656A	FSE server add 1 TB (2-20 TB)	Add an additional 1 TB of file migration capacity when the current paid-for capacity is less than 20 TB.
T3657A	FSE server add 1 TB (21-100 TB)	Add an additional 1 TB of file migration capacity when the current paid-for capacity is less than 100 TB but more than 20 TB.
T3658A	FSE server add 1 TB (100+ TB)	Add an additional 1 TB of file migration capacity when the current paid-for capacity is more than 100 TB.
<b>Options</b>		
T3659A	Upgrade FSE file system to WORM (1 TB)	WORM capability is set per file system (partition) based on the physical capacity of the disk storage used by that file system.

<b>Warranty and support</b>	HP warrants only that the software media will be free of physical defects for a period of ninety (90) days from delivery. Included with the File System Extender is 9 hours/day x 5 days/week software phone-in and update support for one year after the date of purchase.
<b>Service options</b>	In addition to the bundled 9 x 5 software phone-in and update support, HP Care Packs are available for all FSE part numbers except the media kit (T3648A). An HP Care Pack is defined as an upgrade to the product warranty attribute, available for a specific duration and hours of coverage. HP Care Packs are not available for less than the product's warranty duration. HP Care Packs are available for sale anytime during the warranty period, but the commencement date will be the same as the warranty start date (delivery date to end user customer). Proof of purchase may be required. HP Care Pack services are prepaid. Available Care Pack Services (warranty upgrades): <ul style="list-style-type: none"><li>3-year, 9 x 5 software support (HA106A3)</li><li>4-year, 9 x 5 software support (HA106A4)</li><li>5-year, 9 x 5 software support (HA106A5)</li><li>1-year, 24 x 7 software support (HA107A1)</li><li>3-year, 24 x 7 software support (HA107A3)</li><li>4-year, 24 x 7 software support (HA107A4)</li><li>5-year, 24 x 7 software support (HA107A5)</li><li>1-year, Proactive 24 software support (HA111A1)</li><li>3-year, Proactive 24 software support (HA111A3)</li><li>4-year, Proactive 24 software support (HA111A4)</li><li>5-year, Proactive 24 software support (HA111A5)</li></ul>
<b>Financial services</b>	HP Financial Services provides innovative financing and financial asset management programs to help you cost-effectively acquire, manage and ultimately retire your HP solutions. For more information on these services, please contact your HP sales representative, or visit: <a href="http://www.hp.com/go/hpfinancialservices">www.hp.com/go/hpfinancialservices</a> .

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For more information on HP StorageWorks File System Extender, contact any of our worldwide sales offices, or visit: [www.hp.com/go/ilm](http://www.hp.com/go/ilm).

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