

# HP StorageWorks Enterprise File Services Clustered Gateway

Data sheet



## Boundless agility for your enterprise storage

HP StorageWorks Enterprise File Services Clustered Gateway delivers superior NFS file serving performance with the scalability to take enterprise customers wherever they need to go. Enterprise customers can install what is required for today and scale out tomorrow with up to 16 TB of storage. HP StorageWorks Clustered Volume Manager software provides configurable striping, the ability to aggregate storage across storage arrays, and the capability to grow without limits.

Enterprise File Services Clustered Gateway offers a fully symmetrical architecture that ensures high availability with transparent failover to other nodes. Complete session state is maintained with full data and cache coherency. Rolling upgrades of hardware and software allow for continuous operation and no downtime.

Built with the world's best-selling, industry-standard HP ProLiant servers and manageability tools, Enterprise File Services Clustered Gateway is a proven solution for business environments, including oil and gas, life sciences,

and banking applications. With SUSE Linux® v9 compatibility and the ability to leverage HP ProLiant training, knowledge, experience, and parts, Enterprise File Services Clustered Gateway fits into current and future IT investments.

Enterprise File Services Clustered Gateway provides the flexibility to leverage existing SAN infrastructure and data center tools and solutions for backup, management, and virus protection. Cluster file serving resources can be managed from any node within the cluster, and individual nodes can be selected for special purposes such as backup. This solution lowers costs on backup licensing fees and provides the flexibility to purchase additional file serving capability as needed.

The scalability of the HP StorageWorks Clustered Gateway product is also compatible with the entire line of HP StorageWorks storage array products. The HP StorageWorks Enterprise File Services Clustered Gateway takes advantage of the snapshot capability of the new line of EVA arrays by incorporating this feature in the GUI. Scaling your file serving needs along with your EVA storage provides a total solution that meets your needs today and tomorrow.

HP StorageWorks Enterprise File Services Clustered Gateway delivers affordable agility to any storage infrastructure with the ability to scale out from 2–16 nodes as required. Enterprise customers depend on its proven industry-standard performance and the boundless agility needed for an always-changing environment.



# Enhance NFS file serving performance for your enterprise and add flexible scalability for future growth with the HP StorageWorks Enterprise File Services Clustered Gateway. Built with industry-standard tools and offering high availability, it's the nimble storage solution required for your agile enterprise.

## Key features and benefits

- *Growth without limits:* Enterprise File Services Clustered Gateway scales from 2–16 nodes and achieves a nearly linear increase in NFS file serving throughput performance and NFS client support. Enterprises can purchase the file serving throughput that is needed today, with the ability to easily add performance as business needs grow.
- *High availability:* With fully symmetrical cluster architecture, cluster integrity can be maintained in the event of a single or multiple node failure. Failover from one node to another happens quickly, and the client is unaware that a failure has occurred, as the session state is transparently failed over to all of the remaining nodes with no single-point-of-failure.
- *High performance:* Each node provides approximately 125 MB/s sequential write performance. The architecture is optimized for both read and write performance.
- *Optimized NFS:* Cache coherency and lock integrity are maintained in the event of a single or multiple node failure. NFS clients are uniformly distributed across the cluster to ensure optimal load balancing.
- *Industry standard platform:* Enterprise File Services Clustered Gateway is built on the HP ProLiant DL server—the world's best selling-server with enterprise-class uptime and management features. It includes SUSE Linux v9 Enterprise Server Edition with the latest 2.6 kernel.
- *Lowest cost:* Rather than purchasing a file-serving solution based upon anticipated needs, purchase additional nodes when your file serving needs grow. Building the solution on HP ProLiant servers and a standard Linux operating system ensures a low initial cost and lower total cost of ownership.
- *Easy cluster expansion:* Single cluster nodes include hardware, OS and HP StorageWorks Clustered File System software and optional HP StorageWorks Clustered Volume Manager software pre-installed. This means that nodes can be ordered and quickly integrated into an existing cluster.
- *Optimized performance and array aggregation:* The HP StorageWorks Clustered Volume Manager software provides the ability to configure striping to meet workload and performance demands. Online volume growth and aggregation across multiple arrays allows full use of storage infrastructure. This software is optional and licensed per CPU.
- *Ease of management:* Manage a single cluster rather than individual servers. The cluster can be managed from any node or from any system running Microsoft® Windows® or Linux.

## HP StorageWorks Enterprise File Services Clustered Gateway

Technical specifications

	HP DL380-SL Clustered Gateway	HP DL380-SL Initial Cluster
	The single node model is intended for customers that are adding additional performance throughput and client support to an existing cluster.	The initial cluster is intended for customers installing their first cluster. This model includes two (2) HP DL380-SL Clustered Gateway nodes and Installation and Startup Service.
<b>Maximum number of nodes supported</b>	Up to 16	Up to 16
<b>Maximum file system supported</b>	Up to 16 TB	Up to 16 TB
<b>Maximum volumes</b>	Up to 25	Up to 25
<b>Maximum LUNs</b>	Up to 128	Up to 128
<b>Maximum NFS exports</b>	65,000	65,000
<b>Temperature range</b>	Operating: -50°F to 95°F (10°C to 35°C) Shipping: -40°F to 158°F (-40°C to 70°C)	Operating: -50°F to 95°F (10°C to 35°C) Shipping: -40°F to 158°F (-40°C to 70°C)
<b>Shipping dimensions (H x W x L)</b>	Product: 3.38 x 17.54 x 26.01 in (8.59 x 44.54 x 66.07 cm)	Shipping dimensions depend upon number of nodes ordered and additional equipment ordered.
<b>Shipping weight</b>	51 lbs	Shipping weight depends upon number of nodes ordered and additional equipment ordered.
<b>Form factor</b>	2U (per node)	42U rack including switches
<b>Operating/Non-operating humidity</b>	10% – 90% non-condensing	10% – 90% non-condensing
<b>Operating/Non-operating wet bulb temperature</b>	82.4°F (28°C)	82.4°F (28°C)
<b>Airflow</b>	830 square inches (5,350 sq cm) of hde, evenly distributed from top to bottom to permit adequate airflow (equivalent to the required 64 percent open area ventilation)	830 square inches (5,350 sq cm) of hde, evenly distributed from top to bottom to permit adequate airflow (equivalent to the required 64 percent open area ventilation per node)
<b>File services supported</b>	FTP, HTTP, NIS, NNTP, IMAP4, POP4, SMTP	FTP, HTTP, NIS, NNTP, IMAP4, POP4, SMTP
<b>Operating systems supported</b>	SUSE Linux v9 Enterprise Edition	SUSE Linux v9 Enterprise Edition
<b>Storage arrays supported</b>	HP StorageWorks Modular Smart Arrays, HP StorageWorks Enterprise Virtual Arrays, HP StorageWorks XP Disk Arrays	HP StorageWorks Modular Smart Arrays, HP StorageWorks Enterprise Virtual Arrays, HP StorageWorks XP Disk Arrays

### Ordering information

Part number	Model name	Model description
390819-B21	HP DL380-SL Clustered Gateway	Single cluster node that includes HP ProLiant server, OS, HP StorageWorks Clustered File System software, and supporting documents.
390820-B21	HP DL380-SL Initial Cluster	Initial cluster configuration that can be configured to order in the factory. Select from 2–16 nodes. This model includes installation and startup service at customer site. In addition to basic setup and configuration, customer training is provided on basic operations. This SKU can be configured to include rack, FC switches, network switch, and all necessary cables. Rack, switches, and cabling can be deleted from the SKU, if desired. This configuration ships from the factory fully racked (if applicable).

### Options

Part number	Model name	Model description
391672-B21	HP Clustered Volume Manager License	License to use HP StorageWorks Clustered Volume Manager software, which allows the customer to stripe across multiple arrays and spindles for greater file serving performance and storage aggregation.

# HP StorageWorks Enterprise File Services Clustered Gateway



HP DL380-SL Clustered Gateway

## What's included

Cluster node includes one HP ProLiant DL380 G4 server with two Intel® Xeon™ 3.4 GHz/800 Processors, 4 GB memory (4 x 1 GB), DVD-ROM, redundant fan and power supply, floppy drive, embedded dual-port 10/100/1000 NIC, PCI-X 10/100/1000 single port NIC, 2 Gb QLogic FC HBA, SUSE Linux v9 Enterprise Edition, 128 MB battery-backed write cache, HP Lights-Out drivers and agents for SUSE Linux, HP Health App and Insight Management Agents, Smart Array 6i controller, two 36 GB mirrored disks for OS, HP StorageWorks Clustered File System software, HP StorageWorks Clustered Volume Manager software (optional license required), documentation, and country-specific power cord.

Initial cluster configuration includes two (2) cluster nodes and Installation and Startup Service. Additional nodes, up to 16, can be ordered. Recommendations for 42U HP 10642 rack, rack side panels, HP StorageWorks 4/32 SAN switch, HP ProCurve 2848 switch, and node interconnect cables is provided. If appropriate this configuration will be fully racked when shipped from the factory.

## Warranty and support

HP warrants only that the software media will be free from physical defects for a period of 90 days from delivery.

Installation and startup services are included with the initial cluster configuration. HP also provides one year of 24 x 7 hardware support for the HP ProLiant server. One (1) year of 24 x 7 software support is provided for HP StorageWorks Clustered File System software and HP StorageWorks Clustered Volume Manager software (optional software product). HP also provides one (1) year of 24 x 7 software support for the SUSE Linux operating system.

## Warranty and support options

HP Care Pack Services offers upgraded service levels to extend and expand your standard product warranty with easy-to-buy, easy-to-use support packages that help you make the most of your hardware and software investments. They let you choose the support levels that meet your business requirements, from basic to mission-critical. They help you contain total cost of ownership.

HP Care Pack warranty extensions can be purchased along with HP products to cost-effectively upgrade or extend your warranty. For many products, post-warranty HP Care Pack Services are available when your original warranty has expired.

HP eSupport is a portfolio of technology-based services that assist you with managing your business environment—from the desktop to the data center. The HP support portal provides one-stop access to the information, tools, and services you need to manage the daily operations of your IT environment. Features include:

- Access to self-solve tools (including search of the technical knowledge base)
- Efficient logging and tracking of support cases
- Collaboration with other business and IT professionals
- Download of patches and drivers
- Access to diagnostic tools
- Proactive notification of relevant information

Access to certain features of the support portal requires an HP service agreement. To access the support portal, visit: [www.hp.com/support](http://www.hp.com/support).

For additional information about HP Care Pack Services, visit: [www.hp.com/hps/carepack/services](http://www.hp.com/hps/carepack/services).

## Financial services

HP Financial Services provides innovative financing and financial asset management programs to help customers cost-effectively acquire, manage, and ultimately retire your HP solutions. For more information on these services, please contact your HP sales representative or visit: [www.hp.com/go/hpfinancialservices](http://www.hp.com/go/hpfinancialservices).

## Customer support

HP Customer Support provides a broad spectrum of services to commercial and enterprise customers, including performance and availability services such as proactive mission-critical services and support management services for deployment of the entire IT infrastructure, including HP and multi-vendor environments. For more information on these services, contact your HP sales representative or visit: [www.hp.com/hps/support](http://www.hp.com/hps/support).

## For more information

For more information, visit: <http://h18006.www1.hp.com/products/storageworks/efs/index.html>

©2005 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein. Linux is a U.S. registered trademark of Linus Torvalds. Microsoft and Windows are U.S. registered trademarks of Microsoft Corporation. Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States or other countries.