



# Dell EqualLogic FS7500: Adds NAS for a scale-out unified storage solution

Now you can improve productivity and streamline your IT infrastructure by storing block and file data on a single platform with EqualLogic PS Series arrays and the Dell™ EqualLogic™ FS7500. The FS7500 is a high performance solution that works with new and existing EqualLogic storage arrays so you can easily configure and manage iSCSI, CIFS, and NFS access to a single flexible storage pool using EqualLogic Group Manager. Its unique scale-out architecture lets you expand storage capacity and/or system performance as your needs change over time.

## Scale-out unified storage, optimized for the midrange

Unstructured file data is a massive portion of IT storage environments — and it's growing faster and faster. Whether it's documents, video or other rich content, decision makers want more of it, and so do your customers. But just adding disks to support that mountain of file data won't help.

The EqualLogic FS7500 helps you solve this problem. Unlike many unified storage solutions that only scale in capacity, the EqualLogic FS7500 can scale capacity and performance. For more capacity, add more EqualLogic arrays; for increased performance, add more FS7500 systems. As you scale your FS7500 solution, you can actually increase the overall performance of your storage environment.

As your needs grow and change, you can dynamically modify your block and file storage capacity without disrupting existing applications and storage systems. The industry's only scale-out solution optimized for mid-sized and smaller deployments, the EqualLogic FS7500 is a key enabler of Dell's Fluid Data Architecture, which delivers solutions that give people the right information at the right time for the right cost.

## Expand traditional file share limits

The EqualLogic FS7500 implements Dell Fluid File System (FluidFS), which is designed to optimize file access performance and hardware utilization while eliminating capacity constraints. A key component in Dell's Fluid Data strategy, FluidFS is a high-performance scale-out file system that presents a single file-system namespace through a virtual IP address, regardless of cluster size.

Most NAS solutions have strict limits on file system and share size, but Dell Fluid File System has no such limitations. With the FS7500, you can even expand a single file share up to the capacity of your EqualLogic backend (maximum of 509TB usable storage).

## A flexible and practical alternative to Windows File Servers

NAS deployment and management functionality is fully integrated into EqualLogic Group Manager, including administration, monitoring and maintenance operations. Group Manager automates the initial setup and configuration of your FS7500 system, simplifying the process of creating volumes and shares. A FS7500 NAS system can be configured and added to EqualLogic arrays quickly and efficiently.

## Advanced features, EqualLogic family values

The EqualLogic FS7500 includes a snapshot capability (separate from iSCSI snapshots). End-users can restore previous versions of files from a directory of these snapshots themselves, without contacting IT, freeing up administrators for more productive work. To help improve storage utilization, the EqualLogic FS7500 features a virtualization layer that lets you expand NAS service dynamically. The FS7500 is easily integrated into your backup environment with support for NDMP backup.

As with all Dell EqualLogic products, the FS7500's new features, software licensing and future firmware enhancements are included in the base price.

## High availability file serving

A dual active/active controller architecture and sizable onboard cache give the EqualLogic FS7500 outstanding performance. Each system provides 48GB of battery-protected memory and traffic is automatically load balanced across all nodes.

The EqualLogic FS7500 supports all new and existing EqualLogic arrays. A single FS7500 system can support up to eight EqualLogic PS Arrays with the ability to add another FS7500 system into the same namespace to improve file performance.

Brings NAS capability  
for scale-out, high  
performance unified  
storage with the  
EqualLogic ecosystem

| Feature  | Dell™ EqualLogic™ FS7500   |
|--|--|
| Protocol support   | CIFS (SMB 1), NFSv3, NDMP 4, SNMP, NTP, iSCSI, Active Directory, LDAP, NIS (Network Information Service)   |
| Storage arrays supported                                     | New or existing EqualLogic PS arrays with version 5.1 or later firmware  |
| Expansion capability   | Each 2-controller FS7500 system can support up to 8 EqualLogic PS series arrays  |
| Storage nodes  | Dual controllers operate in an active-active environment mirroring the system's cache<br>Each controller contains 24 GB memory protected by the EqualLogic FS7500 backup power supply  |
| Management   | EqualLogic Manager graphical user interface, CLI interface   |
| Front-end NAS connectivity                                   | Four 1 Gb IP ports per node for front-end CIFS/NFS connectivity  |
| Backend storage array connectivity                           | Four 1 Gb IP ports per node for back-end iSCSI connectivity  |
| Snapshot capability  | Redirect-on-write snapshots  |
| Power  |  |
| Wattage  | 502 W (Energy Smart); Back-up Power Supply 500 W   |
| Voltage  | Each controller 90 – 264 VAC, auto-ranging, 47 – 63 Hz ; Backup Power supply 120V models: 90-140V, auto-sensing; 230V models: 180-264V, auto-sensing   |
| Heat dissipation   | 1712.9 BTU/hr maximum (Energy Smart)   |
| Maximum inrush current                                       | Under typical line conditions and over the entire system ambient operating range, the inrush current may reach 55 A per power supply for 10 ms or less   |
| Physical (per controller)                                    |  |
| Height   | 4.26 cm (1.68 in)  |
| Width  | 48.24 cm (18.99 in) (includes rack latches)  |
| Depth  | 77.2 cm (30.39 in) (includes bezel and power supply handles)   |
| Maximum weight   | 17.69 kg (39 lbs)  |
| Physical (Back-up power supply, low and high voltage models) |  |
| Height   | 4.2 cm (1.6 in)  |
| Width  | 43.4 cm (17.1 in)  |
| Depth  | 72.3 cm (28.5 in)  |
| Maximum weight   | 30 kg (66 lbs)   |
| Environmental  |  |
| Temperature  | Operating: 10° to 35°C (50° to 95°F) with a maximum temperature gradation of 10°C per hour<br>Note: For altitudes above 2950 feet, the maximum operating temperature is de-rated 1°F/550 ft<br>Storage: -40° to 65°C (-40° to 149°F) with a maximum temperature gradation of 20°C per hour |
| Relative humidity  | Operating: 20% to 80% (non-condensing) with a maximum humidity gradation of 10% per hour<br>Storage: 5% to 95% (non-condensing) with a maximum humidity gradation of 10% per hour  |
| Maximum vibration  | Operating: 0.26 Grms at 5 – 350 Hz for 5 minutes in operational orientations<br>Storage: 1.54 Grms at 10 – 250 Hz for 10 minutes in all orientations   |
| Feature  | Dell™ EqualLogic™ FS7500 with Dell™ Fluid File System  |
| Max system size  | 509 TB   |
| Max file size  | 4 TB   |
| Max files  | ~64 billion  |
| Number of directories  | ~34 billion  |
| Max NAS file systems   | 256 per 2-controller FS7500 system, 512 per 4-controller FS7500 solution   |
| Max snapshots per NAS File system                            | 512  |
| Max snapshots  | 10,000 per 2-controller system or 4-controller solution  |
| Memory per FS7500 2-node system                              | 48 GB  |
| File name length   | 255 bytes  |
| Max NFS mounts   | 1024 per 2-controller FS7500 system, 2048 per 4-controller FS7500 solution   |
| Max CIFS shares  | 1024 per 2-controller FS7500 system, 2048 per 4-controller FS7500 solution   |
| Max Quota rules per FS7500 system (user quotas)              | 100,000  |
| Max quota rules per volume                                   | 512  |
| Max directory depth  | 512  |

For more information visit [Dell.com/FS7500](http://Dell.com/FS7500)

