Dell PowerVault Scale-out NAS and Unified Storage

Now you can affordably consolidate block and file data with Dell™ PowerVault™ NX3600 series NAS appliances. The highly scalable NX3600 and NX3610 let you cut complexity, manage storage more efficiently and expand capacity as needed without SAN downtime or application disruption.

There's a growing amount of unstructured data headed your way. Whether it's for documents, images or file-based workflows, storage capacity being deployed for file data continues to increase with no end in sight.

But now you can avoid the costs and headaches of continually adding–and having to manage–more file servers or separate block and file storage systems.

Dell Fluid File System

The PowerVault NX3600 and NX3610 implement Dell Fluid File System (FluidFS), a key component of the Dell Fluid Data™ architecture which delivers solutions that give people the right information at the right time for the right cost.

FluidFS is an enterprise-class distributed file system which is implemented across Dell Storage product lines. It is designed to optimize file access performance and hardware utilization while eliminating capacity constraints all within a single namespace for easy administration. FluidFS presents a storage pool as a single file system with a single IP address to the client(s). It uses cache efficiently to provide fast, highly reliable reads and writes.

The NX3600 and NX3610 work with PowerVault MD32x0i and MD36x0i storage arrays to help provide affordable unified storage with iSCSI, CIFS and NFS access to block-and-file data.

Pay-as-you-grow scalability

The NX3600 has 1Gb Ethernet connectivity to the SAN and client network and the NX3610 has 10Gb Ethernet connectivity. When combined with a PowerVault MD iSCSI array, they give you the flexibility and cost of ownership advantages of highly scalable NAS and unified storage solutions. They provide greater scalability than traditional unified storage because there are no 8, 16 or even 100TB limits to file-system or file share size. With the MD storage backend, file or unified storage capacity can be expanded up to 576TB (usable) with the NX3600 or to 1PB with the NX3610. Performance can be increased by scaling out across 2 NX3610 appliances within a single namespace.

A flexible and practical alternative to Windows file servers

Managing multiple file servers and namespaces is resource-intensive. The PowerVault NX3600 series lets you consolidate so you can store more data and manage it more efficiently. Using a single platform for block and file data helps avoid the overhead, cost and complexity of two separate systems. The PowerVault NX3600 series features an easy, wizard-based NAS configuration utility for initial setup. A web-based user interface, NAS Manager, enables you to conveniently configure NAS storage, create and modify volumes and shares, and monitor performance.

To help improve storage flexibility and utilization, the PowerVault NX3600 series features a virtualization layer that lets you expand NAS storage dynamically without any downtime.

Affordable data protection and highly available architecture

The NX3600 series incorporates several data protection features, including user-restorable snapshots, asynchronous replication and NDMP backup capabilities at no additional cost. The NX3600 and NX3610 also help reduce the risk of data loss by incorporating several hardware and software features that protect data during read and write operations. Checksums and failsafe journaling protect file metadata. And, with its dual active\active controllers, hot swappable components and integrated battery-backed cache, the PowerVault NX3600 series gives you data protection and excellent performance.

Unify your block and file data affordably with the NX3600 Series NAS appliances.

Feature	Dell™ PowerVault NX3600/NX3610
NAS Appliance	Dual controllers operate in an active/active environment mirroring the system's cache Each NAS Appliance has dual active\active controllers with cache mirroring and integrated backup power supply. Each controller contains 24 GB memory
Memory per NX3600/NX3610 appliance	24 GB (NX3600) 48 GB (NX3610)
Protocol support	CIFS/SMB v1.0, NFS v3, iSCSI, NDMP 4, Active Directory, LDAP, NIS (Network Information Service) (NIS), Network Time Protocol (NTP), Simple Network Time Protocol (SNTP), Simple Network Management Protocol (SNMP), Address Resolution Protocol (ARP), Link Aggregation (IEEE 802.3ad), Adaptive Load Balancing (ALB)
Storage arrays supported	MD3200i, MD3220i, MD3600i, MD3620i
Expansion capability	NX3600 systems work with MD3200i and MD3220i storage arrays and can be supported with MD1200 Series expansion enclosures. NX3610 systems work with MD3600i and MD3620i storage arrays. In scale-out configuration (two NX3610 appliances) two MD3600i or two MD3620i are being deployed. NX3610 capacity is also expanded with MD1200 Series enclosures
Management	Dell PowerVault NAS Manager graphical user interface, command line interface
Maximum containers enabled for replication in a NAS cluster	100
Total client connectivity ports	NX3600: 4 x 1GbE ports per appliance NX3610: 4 x 10GbE ports per appliance
Total SAN connectivity ports	NX3600: 4 x 1GbE ports per appliance NX3610: 4 x 10GbE ports per controller
Max NAS reserve size	576TB per appliance; 1 PB with two NX3610 appliances
Max share size	576TB per appliance, 1PB with two NX3610 appliances
Max file size	4TB
File name length	255 bytes
Max files	~64 billion (32 billion per appliance)
Number of directories	~68 billion (34 billion per appliance)
Max directory depth	512
Max NAS virtual volumes	512 (256 per appliance)
Snapshot capability	Redirect-on-write snapshots
Max snapshots per NAS volume	512
Max snapshots per NAS cluster	10,000
Max NFS exports per NAS cluster	1024
Max CIFS shares per NAS cluster	1024
Max concurrent CIFS connections	200 (NX3600), 1500 per NX3610 appliance
Max quota rules (user quotas)	100,000
Max quota rules per NAS volume	512
Max local users/groups in a NAS cluster	300
Max block-level replication policies	256
Number of NAS appliances in each replication partner	Each NAS cluster in replication partnership must contain same number of NAS appliances
Power	
Wattage	Output 717W
Voltage	90V AC to 264V AC, auto-ranging, 47 Hz/63 Hz. Note: This system is also designed to be connected to IT power systems with a phase to phase voltage not exceeding 230 V
Heat dissipation	2446 BTU/hr. Note: Heat dissipation is calculated using the power supply wattage rating. Its values are for the entire system which includes chassis and two controllers
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 dual controller appliance)	
Height	8.64 cm (3.4 in)
Width	44.63 cm (17.6 in) (does not include rack flange)
Depth	81.30 cm (32.0 in) (includes bezel and controllers installed)
Maximum weight	69.5 lbs

For more information visit Dell.com/NX3600

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