Quantum®

StorNext M440 / M660XL
High-Performance Metadata Appliances for StorNext Environments

STORNEXT SOLUTIONS FOR DEMANDING WORKFLOWS

From genomic research to seismic exploration to post-production for feature films, customers across industries are experiencing tremendous growth in digital assets. These large-scale media and data files are generated at high rates, are often difficult or impossible to recreate, and have great value to the business. Increasingly, large data sets and rich digital content are also showing up in the enterprise, government agencies, and other organizations that are less experienced in managing the huge numbers of files and the capacity they require. Built on the power of the StorNext® 5 platform, Quantum's StorNext Appliances are purpose-built for managing these extreme data environments with scalable, high-performance solutions that are cost effective and easy to manage. Central to controlling the StorNext environment are the StorNext M440 and StorNext M660XL Metadata Appliances.

OPTIMIZED FOR SHARED, HIGH-PERFORMANCE WORKFLOWS

Built for the demands of large-scale media and data workflows, the StorNext Metadata Appliances are best-of-breed in storage scalability and performance. The StorNext Metadata Appliances create shared data pools and provide ultra-fast concurrent access by multiple users across the SAN and LAN. This eliminates the need for multiple copies of the same file, reduces storage space, simplifies production workflows, and enables faster project completion.

HIGHLY SCALABLE FILE SYSTEMS AND COST-EFFECTIVE ARCHIVING

StorNext Metadata Appliances can be combined with StorNext's policy-based storage tiering to give customers virtually unlimited space. Lower-priority data is migrated to less expensive storage tiers—disk or tape—while remaining accessible through the StorNext File System's global namespace. The StorNext Metadata Appliances are archive-ready for integration with the StorNext AEL Archive and StorNext Storage Manager. StorNext solutions provide performance and scalability while significantly lowering total cost of ownership relative to traditional storage approaches.

APPLIANCES FOR ENVIRONMENTS OF EVERY SCALE

All StorNext Metadata Appliances include dual metadata controller nodes, a dedicated metadata array, and factory-installed and licensed software—engineered, tested, and certified by Quantum. Powered by StorNext 5, all metadata appliances include ten StorNext File System SAN client licenses for Linux, Windows, or UNIX, a High Availability license for failover, and a Distributed Data Mover (DDM) license to extend archive performance. The StorNext M445 SSD also features solid-state disk drives for enhanced metadata operation, with performance improvements of up to 8x. The StorNext M660XL appliance also includes dual gateway licenses for high-speed LAN access.

KEY FEATURES AND BENEFITS

- **Purpose-built for StorNext environments**
  The power of StorNext high-performance file sharing, now available in a metadata appliance from Quantum.

- **Ease of deployment and predictability**
  Factory-installed and factory-licensed software for simplified deployments and out-of-the-box reliability.

- **High-performance shared access**
  High-performance data sharing and concurrent access by multiple users across the SAN and LAN.

- **Archive acceleration**
  Distributed Data Mover (DDM) on standby node extends archive performance.

- **Heterogeneous environments supported**
  Collaboration across Linux, Windows, UNIX, and Mac OS X operating systems.

- **Protects your StorNext investment**
  Compatible with all other StorNext appliances and StorNext software solutions.

- **World-class support from Quantum**
  Customers have a single vendor experience from point of purchase to service and support from StorNext experts at Quantum.
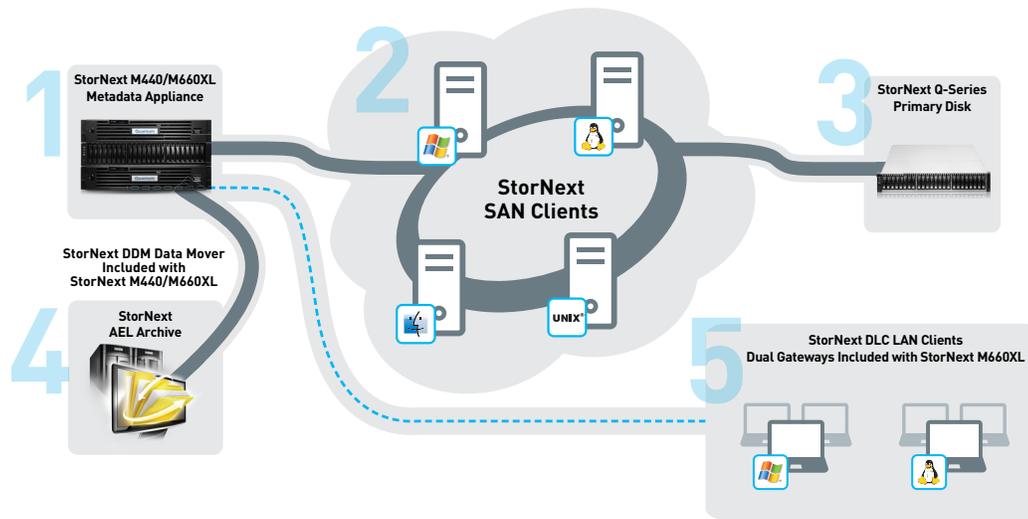
Also available in the StorNext M445 SSD:

- **Solid-state drives**
  For up to 8x the performance improvement for metadata operations.

Also available in the StorNext M660XL:

- **High-speed LAN access**
  Two StorNext Gateway licenses with unlimited DLC client support and load balancing for performance.

- **More redundancy**
  Redundant FC ports, redundant Ethernet ports, and more hot spare drives per metadata array.

- **Designed for data growth**
  Optional metadata expansion array for scalability to 8 file systems and 1 billion files.

For more information on these optional products please reference the StorNext software datasheet.

Major Components of the StorNext Metadata Appliance Solution

StorNext M440/M660XL Metadata Appliance — 1

StorNext DDM Data Mover Included with StorNext M440/M660XL

StorNext AEL Archive — 4

StorNext SAN Clients — 2

StorNext Q-Series Primary Disk — 3

StorNext DLC LAN Clients Dual Gateways Included with StorNext M660XL — 5

1. **StorNext Metadata Appliance**
   "Traffic cop" for scalable, high-performance shared storage.

2. **StorNext SAN clients**
   10 clients included.
   Add-on clients available.

3. **StorNext Q-Series Storage**
   Or other scalable, high-performance disk.

4. **StorNext AEL Archives and StorNext Storage Manager**
   For cost-effective storage tiering and archiving. StorNext M440 and M660XL includes DDM license for archive acceleration.

5. **StorNext DLC LAN Access**
   Dual gateway licenses included with StorNext M660XL. Additional gateways available via StorNext G300 appliances.

TECHNICAL SPECIFICATIONS

STORNEXT METADATA APPLIANCES

	StorNext M441D	StorNext M441Q	StorNext M445D SSD	StorNext M445Q SSD	StorNext M661XL	StorNext M662XL
Scalability	Up to 1.2 billion in unmanaged file systems		Up to 400 million files in managed or unmanaged file systems		Up to 5 billion in unmanaged file systems	
	Up to 1 billion in managed file systems				Up to 1 billion in managed file systems	
	2 or 4 file systems		2 or 4 file systems		8 or 16 file systems	
Software included in base system	10 File System SAN Clients		10 File System SAN Clients		10 File System SAN Clients	
	High Availability		High Availability		High Availability	
	DDM license for secondary node		DDM license for secondary node		DDM license for secondary node	
					Dual StorNext Gateway with unlimited DLC clients	
Metadata Storage	Dedicated high performance metadata array		Dedicated high performance metadata array		Dedicated high performance metadata array	
Optional Metadata Expansion	Yes, additional disk for metadata		Yes, additional SSD and disk for metadata		Yes, complete expansion unit for metadata	
High-Availability	Dual metadata controllers with automatic failover					
	RAID 1					
	Redundant power supplies					
	Redundant cooling fans					
	4GB mirrored RAID battery backed cache					
		Redundant Fibre Channel Ports		Redundant Fibre Channel Ports	Redundant Fibre Channel Ports	
Form Factor	6U total height				6U total height	
	6U with optional metadata disk expansion kit				8U with optional metadata disk expansion unit	
	Rack-mountable				Rack-mountable	
Connectivity	Dual 8Gb FC per metadata controller	Quad 8Gb FC per metadata controller	Dual 8Gb FC per metadata controller	Quad 8Gb FC per metadata controller	Quad 8Gb FC per metadata controller	
	Three 1GbE per metadata controller				Eleven 1GbE per metadata controller	Seven 1GbE per metadata controller
						Two optical or copper Twinax 10GbE
Client OS Support	Linux, Windows, AIX, HP-UX, Solaris, Mac OS					

ENVIRONMENTAL

	StorNext M441D, M441Q, M445D, and M445Q		StorNext M661 and M662	
Power Consumption	Base system operating power 725 watts		Base system operating power 1100 watts	
	Base system and expansion kit operating power 850 watts		Base system and expansion unit operating power 1350 watts	
Operating Temperature	50° to 95°F (10° to 35°C)			
Power Input	NEMA 5-15P, CEE 7/7			
Input Voltage	100 to 240VAC			
Frequency	50 to 60Hz			

ABOUT QUANTUM

Quantum is a proven global expert in Data Protection and Big Data management, providing specialized storage solutions for physical, virtual and cloud environments. From small businesses to major enterprises, more than 100,000 customers have trusted Quantum to help maximize the value of their data by protecting and preserving it over its entire lifecycle. With Quantum, customers can Be Certain they're able to adapt in a changing world – keeping more data longer, bridging from today to tomorrow, and reducing costs. See how at **www.quantum.com**.

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