

## StorNext 3.0 Product Update: Distributed LAN Client

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## Executive Summary

StorNext®, Quantum’s next generation data management solution, is engineered to enable rapid file sharing amongst servers and provide cost effective data retention. StorNext 3.0 introduces advanced data sharing capabilities that allow LAN-based systems to access StorNext volumes. These systems, termed Distributed LAN Clients, connect to StorNext volumes through clustered gateway systems.

Distributed LAN Client is an important addition to the StorNext data sharing offering, allowing lower cost connectivity to StorNext storage by applications requiring intermittent, or only partial access to a shared data repository. This is especially attractive to customers with High Performance Computing (HPC) and rendering projects where a large data set is broken into segments and processed by multiple servers. Distributed LAN Client also solves key limitations with NFS and CIFS data sharing through improved resiliency, load balancing and per-stream performance.

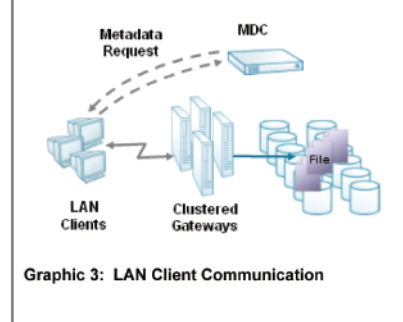
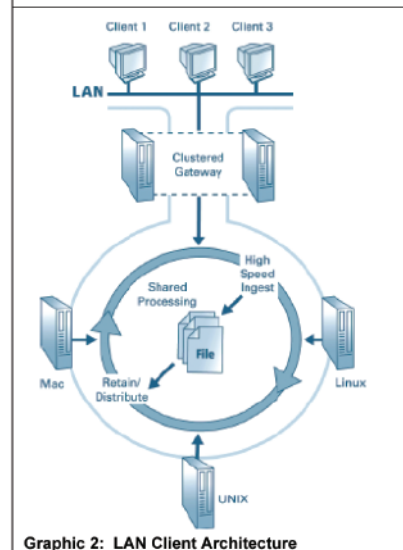
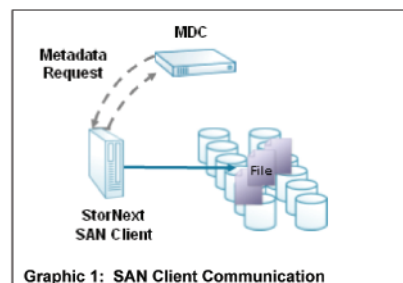
## Methodology

Traditional StorNext clients, referred to as SAN clients, connect directly to a shared SAN storage pool - typically via Fibre Channel (FC). Multiple clients can access the storage pool concurrently, so a MetaData Controller, MDC, is required to manage access (see graphic 1). The MDC serves as a traffic cop, handling disk allocation as well as client side buffering so that when multiple clients are reading / writing from the same file, they all see the same file content. SAN Clients is ideal for customers that have low latency, high throughput requirements (300s+ MBps to multi-GBps per node performance).

For customers that are not bound by extreme throughput requirements or have a mix of performance requirements, StorNext offers the lower cost Distributed LAN Client. The LAN Client allows LAN based servers to indirectly connect to shared storage via clustered gateway systems. The gateways are SAN clients that connect directly to the shared storage pool over FC, but service LAN client I/O instead of running customer applications. LAN Client is ideal for customers that have farms of servers (rendering, seismic processing, etc) all needing to access a shared set of files, but not at FC speeds. LAN Client is also used when customers have a variety of performance needs and want to mix SAN and LAN clients (see graphic 2).

To access the SAN shared storage, a LAN Client starts off by communicating with the MDC to determine file location, disk allocation, and buffering – the same as a SAN Client. Once the LAN Client knows where a file is located, it passes a data request to the clustered gateways that have direct connectivity to the SAN shared storage. The gateway system then retrieves the data and passes it back to the distributed LAN Client (see graphic 3).

While this may sound similar to traditional CIFS / NFS data sharing, Distributed LAN Client is unique in that it utilizes a specialized TCP/IP protocol designed for higher per-stream performance and resilient communication. The specialized protocol is optimized for StorNext communications and can achieve near line-rate throughputs. The protocol also provides resiliency by having each LAN Client attach to multiple clustered gateways. When the LAN Client wants to access data, it balances its I/O across the available gateways and, if a gateway system is unavailable, fails over I/O to another one of the gateways.





For contact and product information, visit [quantum.com](http://quantum.com), call **800-677-6268** or send an email to [softwareinfo@quantum.com](mailto:softwareinfo@quantum.com)

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