BROCADE iSCSI SAN SOLUTIONS

DATA CENTER

Seamlessly Scale 1 GbE iSCSI SANs with 10 GbE Storage

HIGHLIGHTS

Brocade® Ethernet switches help seamlessly scale shared storage through:

- Support for 1 Gigabit Ethernet (GbE) and 10 GbE iSCSI storage arrays within a single network environment
- High-performance 1 GbE and 10 GbE connections for servers and storage
- Flexible network expansion with plug-and-play stacking and 10 GbE scalability
- Simplified network administration with Brocade IronView® Network Manager (INM)
- CapEx and OpEx savings, while providing storage solutions that meet the growing business needs of today and tomorrow

iSCSI storage networks enable businesses to consolidate and virtualize storage resources while leveraging standard Ethernet infrastructure. These iSCSI solutions free up storage space that was previously tied to specific servers in Direct-Attached Storage (DAS) configurations. Increasing storage utilization in turn drives down capital and operating expenses. With business application demands increasing continuously, along with the desire to virtualize all IT resources, there is a heightened need for higher-performance storage. Storage solutions networked with Brocade Ethernet switches allow businesses to scale out capacity of iSCSI environments with high-performance 10 GbE storage in an easy-to-administer and cost-effective way.

SHARED STORAGE SIMPLIFIED

Starting almost a decade ago, 1 GbE iSCSI allowed block storage resources to be networked on the same type of Ethernet infrastructure used for communication between client computers and servers. Even though it is still best practice to isolate iSCSI traffic on a dedicated network, IT groups can utilize a network technology that is familiar. Whether businesses already have 1 GbE iSCSI storage or are looking to deploy iSCSI storage for the first time, they need to look ahead to find out how to integrate high-performance 10 GbE iSCSI storage into existing environments.

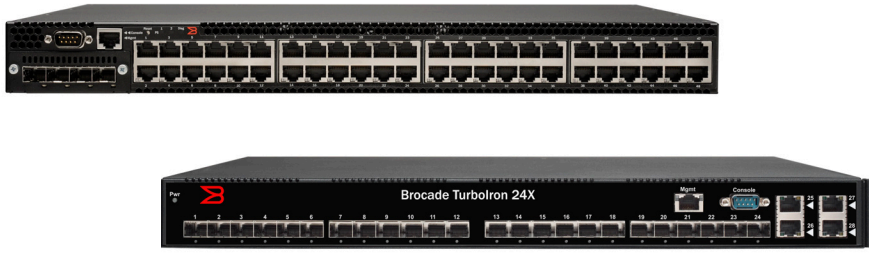

Figure 1.
Brocade FCX-648 (top)
and Brccade TI-24X (bottom)

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It is critical that 1 GbE iSCSI solutions provide investment protection to ensure that the shared storage environment can be expanded with 10 GbE iSCSI storage in the future. This prevents "storage islands" from developing with the 1 GbE arrays on their own network and the 10 GbE arrays on a separate network. Storage islands increase management complexity, limit storage flexibility, and begin to take up free space, reintroducing some of the inefficiencies of DAS.

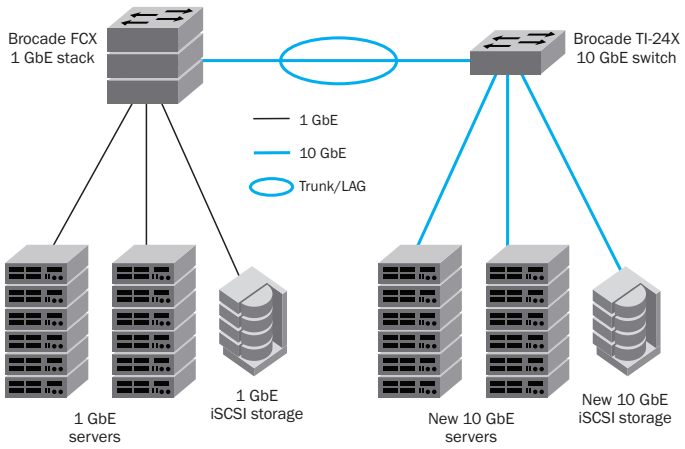

Figure 2. Seamlessly scale a 1 GbE network with 10 GbE connections.

ENABLING SEAMLESS iSCSI EXPANSION WITH 10 GBE STORAGE

IT organizations often leverage stackable 1 GbE Ethernet switches in their iSCSI Storage Area Network (SAN), providing an easy-to-scale, virtualized network for storage traffic. Switch stacking technologies, such as Brocade IronStack®, allow the network to behave as if it were a single device.

To scale the network with more GbE ports, a new switch is just connected to the stack and no additional configuration is required. Also, the stack is managed as if it were a single device—allowing administrators to focus on storage resources andavoid tedious and complex networking operations.

Stacking is ideal to scale out the iSCSI SAN with 1 GbE connections, but it is also critical to ensure that 10 GbE connections can be added to the network when the need for 10 GbE performance is required. Brocade FCX Series stackable switches also provide high-performance 10 GbE Ethernet ports, allowing the stack to be connected into a switch that predominantly contains high-speed 10 GbE ports, similar to the Brocade TI-24X.

Multiple 10 GbE connections between the FCX stack and the TI-24X can be aggregated, creating a high-speed connection between the 1 GbE and 10 GbE components of the network. This allows the network to be efficiently expanded with 10 GbE connectivity, eliminating the need to create a new network just for 10 GbE iSCSI storage.

These new high-performance 10 GbE ports can be used to connect both storage and servers into the existing iSCSI network. Existing servers with 1 GbE connections can access the newly deployed 10 GbE storage; and new servers with 10 GbE connections can access excising 1 GbE storage. This allows you to utilize 10 GbE iSCSI storage for higher-performance server access to storage or to support more 1 GbE servers per storage array.

Further simplifying network management, Brocade IronView Network Manager (INM) allows the iSCSI network and the rest of the data center IP network to be managed from a single pane of glass.

ABOUT BROCADE

Brocade connects the world's most important information—delivering proven networking solutions for today's most data-intensive organizations. From the data center to high-performance Ethernet networks, Brocade is extending its near-fifteen-year heritage as a leading innovator of advanced storage and networking technology.

For more about Brocade IP products, visit www.brocade.com.

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