



## Strengthening Next-Generation Data Centers

*Extending Fabric Reliability and Manageability with Brocade Server Connectivity Solutions*

During the last two decades, Brocade® has developed a reputation for success in enterprise data centers by providing high-performance, high-availability storage data access, fabric extensibility, and streamlined management for today's most demanding business applications. As a result, the vast majority of global enterprise data centers rely on Brocade technology and solutions to provide fabric connectivity for servers and storage systems and to drive sophisticated storage services for data migration, storage virtualization, and disaster recovery.

With the introduction of Brocade server connectivity solutions, this proven track record of innovation and reliability is now available across data center server platforms, enabling dependable and high-performance storage access. Providing server connectivity solutions is a logical step in fulfilling Brocade's mission to deliver enterprise-class end-to-end storage networking solutions for its global customer base. The advantage Brocade brings to Host Bus Adapter (HBA) design is its expertise in the fabric protocols required to develop world-class directors and switches and the protocol implementations required for advanced HBA functionality.

This expertise has been forged over years of designing successive generations of sophisticated fabric products and rigorous interoperability testing with various vendors' HBAs to ensure reliable operation. In fact, this meticulous level of interoperability testing has provided valuable input to conventional HBA vendors as they work to refine their own HBA protocol designs. In brief, Brocade has collected the experience and technical expertise to design reliable server adapters and is now applying those elements to develop a family of next-generation HBAs that deliver interoperability, reliability, and high performance for today's data center fabrics.

### **A KEY COMPONENT OF THE BROCADE DCF ARCHITECTURE**

These server connectivity solutions are an integral component of the Brocade Data Center Fabric (DCF) architecture, a strategic foundation for building next-generation data centers. Today, data centers are evolving from facilities that simply house conventional server and storage systems to much more sophisticated infrastructures that leverage both server and storage virtualization to streamline data operations and maximize the use of physical resources. This dynamic transformation is in response to the continued data growth, the proliferation of new Web applications, new regulatory compliance requirements, and the growing demands of global business operations.

The Brocade DCF architecture is designed to help IT organizations dramatically increase the utilization of their server and storage assets while simplifying infrastructure provisioning, management, and fault-isolation. As data centers become increasingly virtualized, these organizations will require unified touch points throughout the storage network to deliver and manage advanced storage services. Brocade server connectivity solutions play a vital role in building the type of uniform IT infrastructure that offers the advantage of end-to-end consistency in architecture, product design, and integrated microcode throughout the fabric to support a new class of data center services.

## **A MORE HOLISTIC APPROACH TO VIRTUALIZATION**

By extending its expertise from the fabric to the server interconnection, Brocade provides a much more holistic approach to fulfilling virtualized next-generation data center requirements. Vendors that supply only HBA products, for example, are simply not positioned to provide end-to-end management of the storage network and can control only their own point product functionality. Advanced data center fabric services such as data migration, virtualization, Quality of Service, adaptive networking, security, and data encryption require comprehensive management of both the fabric and HBA elements. This holistic approach enables a much higher degree of stability, unified management, and support throughout the data center.

At the same time, developing both the fabric and server components within a common architectural framework facilitates technical innovation and new storage services capabilities. By introducing its server connectivity solutions, Brocade can accelerate the development of new functionality that extends from the server interconnect all the way to the storage port, optimizing business applications and storage environments.

Brocade is leveraging its vast expertise to develop strategic next-generation server connectivity solutions. As server performance increases, Brocade is addressing the accompanying requirement for higher-performance storage connectivity with 8 Gbit/sec Fibre Channel HBAs and 10 Gigabit Ethernet adapter offerings. For instance, Brocade next-generation HBAs will support boot-from-SAN capabilities to simplify server deployment, ongoing operations, and virtualization to maximize the processing power of each server hardware platform.

This server connectivity evolution aligns with the Brocade DCF architecture, supporting multiple storage protocols and network transports within a unified data center fabric. To create an integrated end-to-end managed solution, organizations can deploy Brocade HBAs in conjunction with Brocade switch and director solutions.

Brocade server connectivity solutions are designed to support more complete and more easily managed SAN environments, especially within the context of next-generation data center and server virtualization requirements. By leveraging nearly 20 years of proven storage networking and data center expertise, Brocade is further enabling organizations to efficiently connect and consolidate their IT resources while increasing performance, simplifying end-to-end management, and reducing their total cost of ownership.

## **MAXIMIZING INVESTMENTS**

To help optimize technology investments, Brocade and its partners offer complete solutions that include education, support, and services. For more information, contact a Brocade sales partner or visit [www.brocade.com](http://www.brocade.com).