

BROCADE ACCESS GATEWAY FOR BROCADE 200E



STORAGE AREA NETWORK

An Innovative Solution for Connecting to SANs

HIGHLIGHTS

- Simplifies the connectivity of servers to any SAN fabric
- Increases scalability for multiple servers into SAN fabrics
- Helps eliminate fabric disruption associated with increased switch-to-fabric deployments
- Simplifies deployment and change management utilizing Brocade Fabric OS
- Features fault-tolerant external ports for mission-critical high availability

Today's IT organizations have increasingly recognized the benefits of Fibre Channel Storage Area Networks (SANs) and are utilizing SAN switches and directors for networking their servers, storage, and tape devices. In turn, Brocade SAN switches and directors have provided a wide range of SAN connectivity options between the edges and the cores of SAN environments.

One growing trend in SAN connectivity is the increased deployment of low-port-count switches connecting a small number of servers. One such environment using this deployment methodology involves connecting multiple workgroup or departmental SAN switches into larger enterprise fabrics.

Brocade has provided industry-leading 4 Gbit/sec Fibre Channel SAN switch solutions for these types of server environments with the Brocade 200E. To address even more connectivity requirements, Brocade now provides enhanced connectivity for the Brocade 200E through Brocade Fabric OS®, enabling the Brocade 200E to operate in either full-fabric switch mode or Brocade Access Gateway mode.

The Brocade Access Gateway simplifies server and storage connectivity by enabling direct connection of servers to any SAN fabric, enhancing fabric scalability by eliminating the switch domain identity, and simplifying the removal of local switch device management.

This unique functionality protects investments in existing Brocade equipment, enabling IT organizations to select either the traditional Brocade full-fabric SAN switch mode or the Brocade Access Gateway mode of operation. Organizations can select the preferred mode via Brocade Web Tools or the Brocade command line interface.

FLEXIBLE SAN CONNECTIVITY

Facilitating broad connectivity for highly scalable, reliable, and manageable SAN environments, the Brocade Access Gateway provides a wide range of features for the Brocade 200E, including:

- Seamless fabric interoperability
- Improved scalability
- Simplified management
- Automatic failover and failback

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Seamless Fabric Interoperability

The Brocade Access Gateway mode eliminates traditional heterogeneous switch-to-switch interoperability challenges. It utilizes N_Port ID Virtualization (NPIV) switch standards to present Fibre Channel server connections as logical devices to SAN fabrics. Attaching through NPIV-enabled edge switches or directors, the Brocade Access Gateway seamlessly connects servers to Brocade, McDATA, Cisco, or other SAN fabrics.

Improved Scalability

Servers have traditionally connected to SANs one switch at a time, each time adding a domain to the fabric. Increasing the number of switches has also meant additional switch domains to manage. These additional domains create complexity and can sometimes disrupt fabric operations during the deployment process.

To address that challenge, the Brocade Access Gateway simplifies the deployment of switches into SAN fabrics by presenting server Fibre Channel connections (rather than switch domains) to the SAN fabric.

By increasing the number of device ports that can be connected to a single fabric port, the Brocade Access Gateway can also support a much larger fabric.

Simplified Management

Using the Brocade Access Gateway to connect Fibre Channel servers to SAN fabrics eliminates certain management tasks associated with traditional SAN switches. In addition, the Brocade Access Gateway eliminates the potential for fabric disruptions that can result from incremental switches or domains joining an existing fabric. Together, these capabilities significantly reduce management workload and administrative complexity.

Automatic Failover and Failback

To enhance availability, the Brocade Access Gateway can automatically and dynamically fail over the preferred I/O connectivity path in case one or more fabric connections fails. This approach helps ensure that I/O operations finish to completion, even during link failures. Moreover, the Brocade Access Gateway can automatically fail back to the preferred fabric link after the connection is restored, helping to maximize bandwidth utilization.

MAXIMIZING SAN INVESTMENTS

Brocade and its partners offer complete SAN solutions to meet a wide range of technology and business requirements. These solutions include education and training, support, service, and professional services to help optimize SAN investments. For more information, contact an authorized Brocade sales partner or visit www.brocade.com.

BROCADE ACCESS GATEWAY SPECIFICATIONS

Operating system	Brocade Fabric OS 5.3 or higher
NPIV switch/director support	<ul style="list-style-type: none"> Brocade Fabric OS 5.1 or higher (Fabric OS 5.2.1 recommended) Brocade M-Enterprise OS 9.0 or higher (running in McDATA native mode) Cisco OS 3.0 or higher
NPIV limits	Up to 255 NPIV IDs per Brocade Access Gateway external port
Scalability	Up to 30 Brocade Access Gateways connected to a single external switch, depending on the switch's processing capability
Management capabilities	<ul style="list-style-type: none"> Management through Brocade Web Tools Configurable through the Brocade command line interface Management Information Block (MIB) support Simple Network Management Protocol (SNMP)-based services Fabric Device Management Interface (FDMI) for managing attached Fibre Channel HBAs RASLOG for event recording and auditing Secure Shell (SSH) for encrypted telnet sessions RADIUS for enhanced user authentication Registered State Change Notification (RSCN) filtering

Usage Note

Certain Brocade switch features are not applicable in Brocade Access Gateway mode, including Admin Domains, Brocade Advanced Performance Monitoring, Brocade Advanced Zoning, direct connection to SAN target devices, Brocade Fabric Manager, Fibre Channel Arbitrated Loop support, FICON®, IP over Fibre Channel, Brocade Inter-Switch Link (ISL) Trunking, Brocade Extended Fabrics, Management Services, Simple Name Services (SNS), port mirroring, Brocade Secure Fabric OS®, and SMI-S.

Note: Brocade Access Gateway Mode is supported only in 16-port configurations.

For information about supported SAN standards, visit www.brocade.com/sanstandards

For information about switch and device interoperability, visit www.brocade.com/interoperability

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