

Brocade Advanced Zoning provides secure access control over fabric resources to prevent unauthorized data access, simplify heterogeneous storage management, segregate storage traffic, maximize storage capacity, and reduce provisioning time.

## BROCADE ADVANCED ZONING

### Highlights

- Increases Storage Area Network (SAN) fabric security through hardware enforcement
- Optimizes IT resources by grouping them into specific zones
- Simplifies management of heterogeneous fabrics with logical symbolic names
- Improves access management of SANs and devices through automatic fabric-wide distribution of zone updates
- Reduces provisioning time with Brocade WEB TOOLS enhancements that support saved zone configurations
- Maximizes SAN management flexibility to meet the objectives of different closed user groups
- Includes programmable fields and actions to customize SAN fabrics in response to user demand and changing user profiles

### Increased Control Over the SAN Environment

Brocade® Zoning and Advanced Zoning are features of Brocade SilkWorm® switch models (with Advanced Zoning available on Brocade 2 Gbit/sec switches). Using zoning, organizations can automatically or dynamically arrange fabric-connected devices into logical groups (zones) across the physical configuration of the fabric.

These zones can include selected storage, servers, and workstations within a Brocade fabric—restricting information access to only the “member” devices in the defined zone. Although zone members can access only other members in their zones, individual devices can be members of more than one zone. This approach enables the secure sharing of storage resources, a primary benefit of storage networks.

The number of devices that can participate in a zone and the number of zones that can be created are virtually unlimited. Organizations can specify zones at the port/switch, Arbitrated Loop-Physical Address

(AL-PA), or World Wide Name (WWN) level. Likewise, zones can vary in size and shape, depending on the number of fabric-connected devices included and the location of the devices. Multiple zones can be included in saved configurations—providing easy control over the enabling or disabling of configurations and avoiding manual changes to specific zones.

#### ADVANCED ZONING APPLICATIONS

Brocade Advanced Zoning enables the following uses:

- **Securing fabric areas:** Provides hardware-enforced security access control, which prevents unauthorized devices from accessing the fabric even if they know the physical or logical address. To participate in a zone, the members must belong to the appropriate Access Control List (ACL) maintained in the switch hardware. Hardware enforcement is available at the port level for 1 Gbit/sec SilkWorm switches and at the port and WWN level for 2 Gbit/sec SilkWorm switches.



**Figure 1.**  
The easy-to-use WEB TOOLS GUI simplifies zone administration.

- **Zoning by WWN:** Isolates zone configurations from physical changes. Zones remain intact if a device's cable connection is changed to any other port in the fabric, even to a different switch.
- **Integrating support for heterogeneous environments:** Helps ensure safe operation by isolating systems that have different operating environments or uses. Varied operating systems can conflict with each other and, if one system must reboot, zoning can protect systems in the other group from disruption.
- **Creating functional areas within the fabric:** Protects production environments against unauthorized access from test or development environments.
- **Designating closed user groups:** Restricts access for specific devices in a zone for exclusive use by zone members.
- **Increasing resource utilization:** Improves resource sharing and simplifies management by logically consolidating equipment.

- **Facilitating time-sensitive functions:** Creates temporary zones that can be scheduled for regular tasks such as backup or batch processing.

#### EASY SETUP AND ADMINISTRATION

Organizations designate zones through specific zone names, and zone members are specified by a physical fabric port number, an AL-PA, a node WWN, or a port WWN. The use of aliases (symbolic names) can simplify administration of zones or members. Organizations can also dynamically change or disable zones, and they can save existing zone configurations for reuse or replication.

Zone management is performed through the telnet interface using out-of-band or in-band communications or through the easy-to-use graphical interface in WEB TOOLS (see Figure 1). Zoning can also be done through third-party enterprise applications that integrate with existing management infrastructures. Applications from Brocade development partners leveraging the Brocade Fabric Access API enable organizations to view, manage, and monitor zoning while performing additional management tasks.

#### 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](http://www.brocade.com).

#### BROCADE ZONING SPECIFICATIONS

Features	Description
Zoning specification	Switch/port, AL-PA, and WWN zoning levels
	Hardware enforcement of all zone types
	Logical configurations maintained through physical changes
	Creation, deletion, and display of temporary zones, zone sets, and aliases
	Addition and deletion of zone members
Zoning enforcement	Display of zone members for all zones, or by individual zone or configuration
	Hardware and software enforcement of access control
Zoning management	Telnet or GUI through WEB TOOLS
	Third-party enterprise applications through Brocade API development partners
	Zoning backup
Zoning backup	Zone configurations saved for reuse