

WEB TOOLS is an easy-to-use, feature-rich, Web-based tool for configuring and administering Brocade fabric switches and small Storage Area Networks (SANs).

WEB TOOLS

Highlights

- Simplify management by viewing all switches in the fabric and their current status from a single interface
- Perform administration and configuration tasks for an entire SAN fabric, specific switches, or individual ports
- Increase flexibility by performing administrative and configuration tasks from any remote location through a Web browser and Internet connection
- View real-time performance data for monitoring and tuning activities
- Utilize wizards to reduce the chances of errors on multi-step management tasks such as zoning
- Leverage support for standards such as Fabric Device Management Interface (FDMI) to extract more meaningful information from the fabric
- Utilize the most robust security available with native support for Brocade Secure Fabric OS®

A Better Way to Monitor and Manage SAN Fabrics

Brocade® WEB TOOLS, an intuitive and easy-to-use interface, enables organizations to monitor and manage single Brocade SilkWorm® Fibre Channel switches and small Brocade SAN fabrics. Administrators can perform tasks by using a Java-capable Web browser from standard laptops, desktop PCs, or workstations at any location within the enterprise. In addition, WEB TOOLS access is available from Web browsers through a secure channel via HTTPS.

EXTENSIVE ADMINISTRATION AND CONFIGURATION CAPABILITIES

To increase the level of detail for management tasks, WEB TOOLS enables organizations to configure and administer individual ports or switches as well as small SAN fabrics. User name and password login procedures protect against unauthorized actions by limiting access to configuration features. WEB TOOLS provides an extensive set of features that enable organizations to quickly

and easily perform key administrative tasks such as:

- Configuring individual switches' IP addresses, switch names, and Simple Network Management Protocol (SNMP) settings
- Rebooting a switch from a remote location
- Upgrading switch firmware and controlling switch boot options
- Maintaining administrative user logins and passwords
- Managing license keys, multiple user accounts, and Radius support for switch logins
- Enabling Ports on Demand capabilities
- Choosing the appropriate routing strategies for maximum performance (dynamic or static routes)
- Configuring links and managing ISL Trunking over extended distances
- Accessing other switches in the fabric that have similar configurations

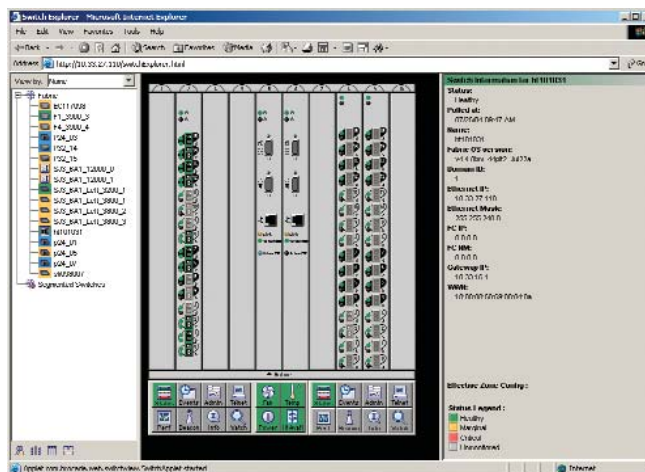


Figure 1. Switch Explorer View for the Brocade SilkWorm 24000 with mixed blade support

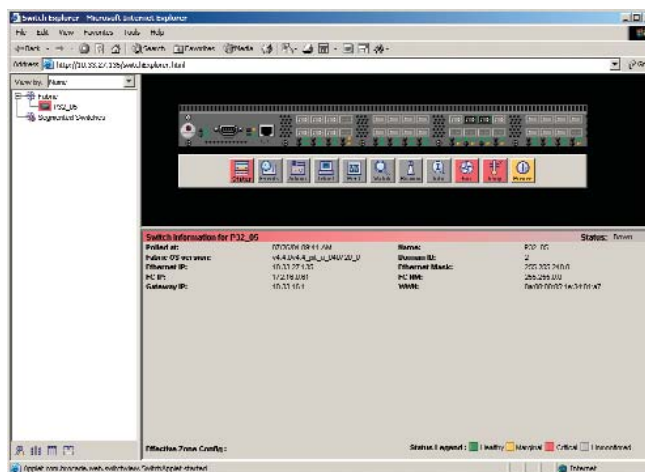


Figure 2. Switch Explorer View for the Brocade SilkWorm 4100

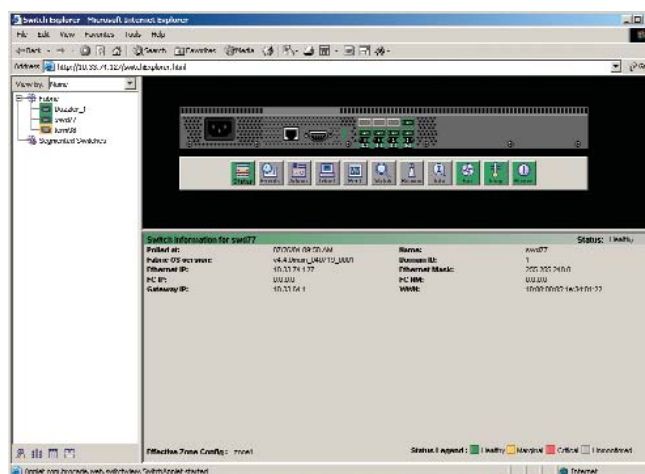


Figure 3. Switch Explorer View for the Brocade SilkWorm 3250

CENTRAL STATUS MONITORING TO SIMPLIFY MANAGEMENT

WEB TOOLS enables the management of any switch in the fabric from a single access point. In addition, any single switch can automatically discover the entire fabric. When administrators enter the network address of any switch in the fabric, the built-in Web server automatically provides a full view of the fabric. From that point, administrators can monitor the status of, and perform tasks on, any switch in the SAN or the entire fabric. WEB TOOLS can manage the switches using either in-band Fibre Channel connections or out-of-band Ethernet connections.

MULTIPLE ADMINISTRATION VIEWS FOR FLEXIBILITY

The WEB TOOLS menu includes fabric-level and switch-level views for both multiswitch and single-switch administration.

Fabric-Level View

- **Switch Explorer View:** Displays all switches in the fabric on a single screen. Switches can be viewed by their user name, IP address, or World Wide Name (WWN—including recognizable vendor name). This graphical display shows all switches (and their status) currently configured in the fabric using an easy-to-read, collapsible, hierarchical tree. It also provides a launch point for monitoring and administering any switch in the SAN as well as fabric-wide functions such as device lists and zoning (see Figures 1 and 2).
- **Fabric Event View:** Displays events collected across the entire fabric from the built-in messaging system on each switch, or more detailed information provided by the optional Brocade Fabric Watch software. This fabric-wide view enables a central repository of events—allowing many switches to be managed like a single entity. Fabric events are sorted by key fields, such as date-time, switch source, or severity level.
- **Fabric Topology View:** Lists the physical configurations—including active domains, paths, and routing information—for all switches in the SAN.

- **Name Server View:** Displays information about all hosts and storage devices currently registered in the fabric. WEB TOOLS automatically updates the Name Server table when new hosts or devices join the fabric. This central view of all devices enables the creation of a single fabric entity from any number of Brocade switches. Hostname is available for hosts and HBAs that support the FDMI-1 standard.
- **Switch Administration View:** Provides the main control point for the switch, including tabs for network, switch, and port settings as well as user, license, firmware, routing, and SNMP administration. The Administration View also has tabs for predefined reports and optional fabric services such as Inter-Switch Link (ISL) Trunking, Remote Switch, and Extended Fabrics.
- **Switch Status Legend:** Provides at-a-glance, color-coded switch status information that indicates whether the switch is in a healthy, marginal, down, or unmonitored condition.

Switch-Level View

From the Switch Explorer View, organizations can click on any switch icon to establish communication with individual switches for in-depth monitoring or for access configuration options. Individual switch views include the following:

- **Switch View:** Provides an active, true-to-life rendition with a point-and-click map of the selected switch. Each port icon displays current port status, and clicking on a port displays the Port Detail View. The states of the power supply, fan, and temperature health are updated dynamically for real-time status monitoring (see Figure 3). Tool icons in the Switch View provide direct access to the Event

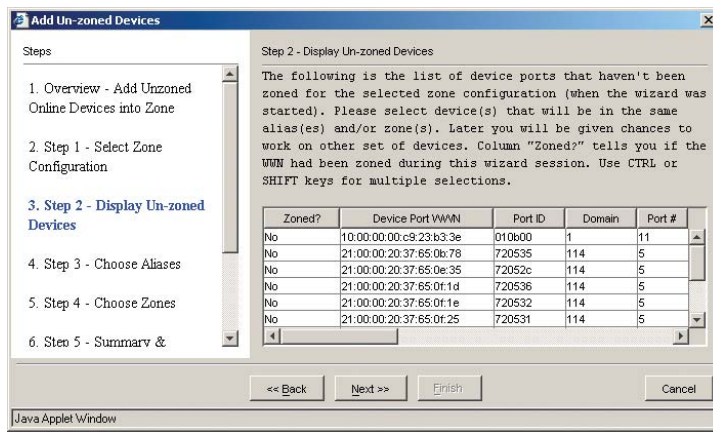


Figure 4. Zoning Wizard View for adding devices to a zone

View, the Administrative View, the Performance View, the Fabric Watch Configuration Page (if licensed), and the Switch Beaconing function.

- **Event View:** Provides a sortable view of all events reported by the switch. The event log includes sortable fields for switch information, time stamps, severity level, and detailed error messages for root cause analysis.
- **Port Detail View:** Displays statistics, general information, and live status monitoring of critical functions for rapid problem isolation and diagnosis. Support for Serial ID Gigabit Interface Converters (GBICs) provides asset management for these critical port components.

ADVANCED SERVICES MANAGEMENT

WEB TOOLS provides the administrative control point for Brocade Advanced Fabric Services, including Advanced Zoning, ISL Trunking, Advanced Performance Monitoring, Fabric Watch, and Fabric Manager integration. For instance, administrators can utilize timesaving zoning wizards to step them through the zoning process (see Figure 4).

TELNET INTERFACE FOR ACCESS TO SPECIALIZED FUNCTIONS

WEB TOOLS provides an interface to telnet functions in order to perform special switch functions and diagnostics that are available only through the telnet interface.

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 WEB TOOLS SPECIFICATIONS

Interfaces

In-band over a Fibre Channel link

Out-of-band through an Ethernet connection

System Requirements

Windows 2000, Windows XP, or Windows 2003

Solaris 2.8, 2.9, or higher

Redhat Linux 9.0 or higher

Windows Memory Requirements

Number of Switches in SAN	Minimum Memory Required
1- 10	256 MB
> 10	512 MB minimum

Browser Requirements

Netscape 4.77 and above for Fabric OS® v2.x only

Internet Explorer 6.0 and above

Java Plug-In 1.4.2 on Solaris and Linux

Java Plug-In 1.3.1_04 or later on Windows



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