WEB TOOLS is an easy-to-use Web-based tool for configuring and administering Storage Area Network (SAN) fabrics and fabric switches.

BROCADE WEB TOOLS

Highlights

WEB TOOLS enables network managers to:

- View all switches in the SAN from a single interface
- Drill down to single switch and port-level details
- Perform administration and configuration tasks for the SAN fabric, fabric switches, and individual ports
- Perform administrative and configuration tasks from any remote location via a Web browser and Internet connection
- View real-time performance data
- Leverage an easy-to-use shortcut panel for commonly performed administrative functions

Easy-to-use Web-based administration for SANs and switches

Brocade WEB TOOLS,™ an intuitive and easy-to-use interface, allows network managers to monitor and manage SAN fabrics consisting of SilkWorm® Fibre Channel fabric switches using a Java-capable Web browser from standard desktop workstations. When the administrator enters the network address of any switch in the fabric, the built-in Web Server automatically provides a full view of the switch fabric. From that switch, the administrator can monitor the status and perform administration and configuration actions on any switch in the SAN.

WEB TOOLS can manage the switches in the fabric either using in-band Fibre Channel connections or out-of-band Ethernet connections.

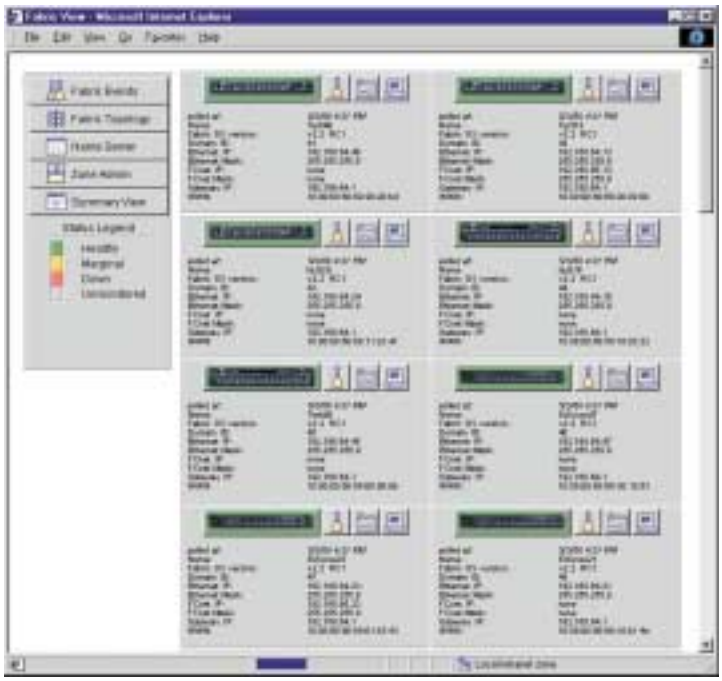
CENTRAL STATUS MONITORING

WEB TOOLS enables management of any switch in the fabric from a single access point. Using a Web browser, administrators can quickly access WEB TOOLS by simply entering the name or IP address of any switch. The WEB TOOLS menu then appears in the Web browser's window, where information about all switches can be retrieved.

THE WEB TOOLS MENU INCLUDES THE FOLLOWING VIEWS:

- **The SAN Fabric View:** Displays all switches in the fabric on a single screen. This graphical display shows all switches currently configured in the fabric and provides a launch point for monitoring and administrating any switch in the SAN. It scales well to large fabrics via a Summary View, which can show twice as many switches as the default detail view.
- **The Fabric Event View:** Displays events collected across the entire fabric from the built-in messaging system on each switch, or more detailed and managed information provided by Brocade Fabric Watch,™ an optional feature. Fabric events may be sorted by key fields such as date-time, switch source, or severity level.

Figure 1.
Fabric View of Brocade WEB TOOLS



- **The Fabric Topology View:** Lists the physical configuration, including active domains, paths, and routing information for all switches in the SAN.
- **The Name Server View:** Displays information about all hosts and storage devices that are currently registered in the fabric. The Name Server Table is automatically updated when new hosts or devices join the fabric.

RAPID ACCESS TO ANY SWITCH

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

- The Switch View is an active point-and-click map of the selected switch. Each port icon displays current port status. A click on a port takes the user to the Port Detail View. The states of power supply, fan, and temperature health are updated dynamically. Tool Icons in the Switch View permit direct access to the Event View, the Administrative View, the Performance View, the Fabric Watch Configuration Page (if licensed), the Administrative View, and the Switch Beaconing function.
- The Event View provides a sortable view of all events reported by the switch.
- The Performance View graphically portrays real-time throughput information for each port and the switch as a whole.
- The Port Detail View displays statistics, general information, and live status monitoring of critical functions for rapid problem isolation and diagnosis. Support for Serial ID GBICs provides asset management for these critical port components.

CENTRAL ZONING ADMINISTRATIVE CONTROL

For multi-switch fabric configurations that include the optional Brocade Zoning™ feature, which limits access to data by selected ports or devices, WEB TOOLS enables users to update zoning functions through an easy-to-use graphical user interface. Fabric OS™ instantly distributes zoning configuration changes to all switches in the fabric. In addition, users of QuickLoop™ may use WEB TOOLS to configure QuickLoop and integrate QuickLoop with zoning.

EXTENSIVE ADMINISTRATION AND CONFIGURATION CAPABILITIES

WEB TOOLS lets network administrators configure and administer individual ports or switches. User name and password login procedures protect against unauthorized actions by limited access to configuration features. In addition, WEB TOOLS provides an extensive set of features, which enable network managers to quickly and easily perform the major administrative functions of the switch, such as:

- Configuring individual switches' IP addresses, switch name, 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
- Controlling individual ports
- Managing license keys
- Updating multiple switches with similar configurations

TELNET INTERFACE FOR ACCESS TO SPECIALIZED FUNCTIONS

WEB TOOLS provides an interface to Telnet functions to perform special switch functions and diagnostics only available through the Telnet interface.

For more information, visit **www.brocade.com.**

For more information about Brocade white papers and offerings, visit the SAN Solution Center at **www.brocade.com/SAN.**

For information about Brocade training and education, visit **www.brocade.com/education_services.**

Figure 2.
Switch View of Brocade WEB TOOLS

BROCADE WEB TOOLS SPECIFICATIONS

Interfaces

In-band over Fibre Channel link
Out-of-band via Ethernet connection

System Requirements

Windows NT, Windows 95, or Windows 98
Solaris 2.61 or higher

Windows Memory Requirements

Number of Switches in SAN	Minimum Memory Required
1– 2	32 MB
3 – 10	65 MB
> 10	128 MB minimum

Browser Requirements

Netscape 4.5.1 and above
Internet Explorer 4.0 and above
Java Plug-In 1.2 on Solaris
Java Plug-In 1.2.2p0005 or later on Windows 2000

BROCADE
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