

BLADE OS™

BBI Quick Guide

RackSwitch™ G8000

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BLADE
NETWORK TECHNOLOGIES

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Contents

Preface ■ 5

Who Should Use This Book ■ 5

Related Documentation ■ 5

Typographic Conventions ■ 6

How to Get Help ■ 7

Chapter 1: Getting Started ■ 9

Features ■ 9

Requirements ■ 9

Switch Set Up ■ 10

 IP Interfaces ■ 10

 Enabling/Disabling BBI Access ■ 10

Web Browser Set Up ■ 10

Starting the BBI ■ 11

Chapter 2: Browser-Based Interface Basics ■ 15

Toolbar ■ 16

 Context Tabs ■ 16

 Commands ■ 16

Navigation Window ■ 17

Forms Window ■ 18

Message Window ■ 18

Chapter 3: Configuring the Switch ■ 19

Configuration Steps ■ 19

 Using the BBI to Load Switch Software ■ 21

Chapter 4: Viewing Statistics ■ 25

Steps for Displaying Statistics ■ 25

Chapter 5: The Dashboard ■ 27

Steps for Displaying Dashboards ■ 27

Preface

The Blade OS Browser-Based Interface (BBI) software is included with the RackSwitch G8000 (G8000). The BBI software lets you use your Web browser to access switch information and statistics, and to perform switch configuration via the Internet.

This *BBI Quick Guide* provides an overview of how to access and use the Blade OS Browser-Based Interface.

Who Should Use This Book

This *BBI Quick Guide* is intended for network installers and system administrators engaged in configuring and maintaining a network. It assumes that you are familiar with your G8000, your Web browser, Ethernet concepts, IP addressing, the IEEE 802.1d Spanning Tree Protocol, and SNMP configuration parameters.

Related Documentation

For documentation on installing the switch physically, see the *Installation Guide* for your G8000.

For details about the switch information, statistics, and configuration parameters available using the Blade OS BBI, see the Blade OS *Command Reference* and *Application Guide*.

Typographic Conventions

The following table describes the typographic styles used in this book.

Table 1 Typographic Conventions

Typeface or Symbol	Meaning	Example
AaBbCc123	This type is used for names of commands, files, and directories used within the text. It also depicts on-screen computer output and prompts.	View the <code>readme.txt</code> file. Main#
AaBbCc123	This bold type appears in command examples. It shows text that must be typed in exactly as shown.	Main# sys
<AaBbCc123 >	This italicized type appears in command examples as a parameter placeholder. Replace the indicated text with the appropriate real name or value when using the command. Do not type the brackets. This also shows book titles, special terms, or words to be emphasized.	To establish a Telnet session, enter: host# telnet <IP address> Read your <i>User's Guide</i> thoroughly.
[]	Command items shown inside brackets are optional and can be used or excluded as the situation demands. Do not type the brackets.	host# ls [-a]

How to Get Help

If you need help, service, or technical assistance, call Blade Network Technologies Technical Support:

US toll free calls: 1-800-414-5268

International calls: 1-408-834-7871

You also can visit our website at the following address:

<http://www.bladenetwork.net>

Click the **Support** tab.

The warranty card received with your product provides details for contacting a customer support representative. If you are unable to locate this information, please contact your reseller. Before you call, prepare the following information:

- Serial number of the switch unit
- Software release version number
- Brief description of the problem and the steps you have already taken
- Technical support dump information (`# show tech-support`)

CHAPTER 1

Getting Started

This chapter briefly describes the software features and requirements for the Blade OS Browser-Based Interface (BBI), and explains how to access the BBI start page.

Features

The network administrator can access switch configuration and monitoring functions through the BBI, a Web-based switch management interface. The BBI has the following features:

- Many of the same configuration and monitoring functions as the command-line interface
- Intuitive and easy-to-use interface structure
- Password protection
- Nothing to install; the BBI is part of the Blade OS switch software
- Automatically upgraded with each new software release

Note – You can perform most configuration and monitoring tasks through the BBI. For a comprehensive set of commands, use the command-line interface. Refer to the *Blade OS Command Reference* for the RackSwitch G8000.

Requirements

- RackSwitch G8000 switch
- Installed Blade OS switch software
- PC or workstation with network access to the switch

- Frame-capable Web-browser software, such as the following:
 - Netscape Navigator 4.7x or higher
 - Internet Explorer 6.0x or higher
 - Mozilla FireFox 1.0.4 or higher
- JavaScript enabled in your Web browser

Switch Set Up

Before you can access the BBI, minimal configuration is required on the G8000.

IP Interfaces

At least one IP interface must be configured on the switch. Each IP interface address provides a point of access for Blade OS switch management. The default management interface is 1, which allows access to Blade OS switch management.

For complete information about configuring IP interfaces, see your *G8000 Installation Guide*.

Enabling/Disabling BBI Access

By default, BBI access is enabled. If you need to disable or re-enable access, use the following command from the command-line interface:

```
RS G8000 (config)# [no] access http enable
```

For more information on the accessing and configuring the switch through the command-line interface, see your *Command Reference*.

Web Browser Set Up

Most modern Web browsers work with frames and JavaScript by default, and require no additional set up. However, you should check your Web browser's features and configuration to make sure frames and JavaScript are enabled.

Note – JavaScript is not the same as Java. Please make sure that JavaScript is enabled in your Web browser.

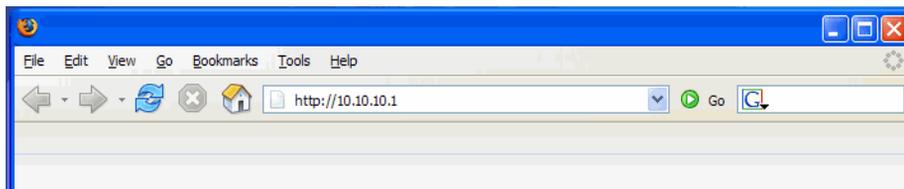
Starting the BBI

When the switch and browser set up is done, follow these steps to launch the BBI:

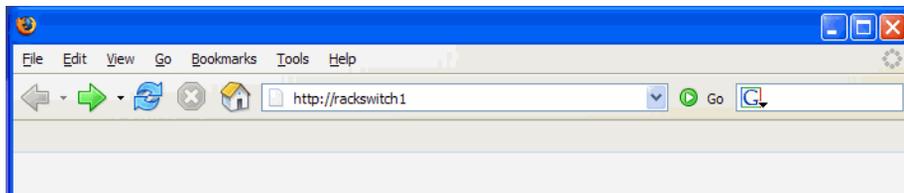
1. Start your Web browser.
2. Enter the switch IP interface address in the Web browser's URL field.

For example, consider an IP interface with a network IP address of 10.0.0.1

You could enter the following:



If the IP interface's address has a name on your local domain name server, you could enter the name instead. For example, you could enter the following:



3. Log in to the switch.

If your switch and browser are properly configured, you are asked to enter a password:



Enter the account name and password for the switch's administrator or user account. The default account name is *admin*, and the default password is *admin*. For more password information, see your *Command Reference*.

4. Allow the BBI Dashboard page to load.

When the proper account name and password combination is entered, the BBI Dashboard page is displayed in your browser's viewing area. There may be a slight delay while the Dashboard page is being initialized. You should not stop the browser while loading is in progress. When loading is complete, a folder icon appears in the left-hand navigation window.

Switch Dashboard	
Switch Name	
Switch Location	
Switch Type	Blade Network Technologies RackSwitch G8000
Switch Up Time	0 days, 16 hours, 26 minutes and 38 seconds.
Last Boot Time	6:11:22 Fri Mar 10, 2009 (reset from console)
Time and date	18:45:04 , 3/10/2009
Timezone Location	Americas-Barbados
Daylight Savings Time Status	disabled
MAC Address	00:22:00:ac:c4:00
IP Address	10.10.10.1
Hardware Revision	14
Switch Serial No	CH490800NN
HW Spare Part No	BAC-00017-00
Manufacturing Date	09/08
Software Rev	5.1.0 (FLASH image1)
Flash Configuration	FLASH image1, active configuration.
Unit Fans Status	Fans are in Forward AirFlow, Warning at 55 C and Recover at 80 C
Unit Temperature	Sensor 1: 40.0 C; Sensor 2: 43.0 C; Sensor 3: 40.0 C; Sensor 4: 45.0 C;
Unit Fans Speed	Fan 1: 9712 RPM; Fan 2: 2730 RPM; Fan 3: 9944 RPM; Fan 4: 9729 RPM; Fan 5: 2591 RPM;
Unit Power Supplies	Power Supply 1: On , Power Supply 2: On
Banner	

Note – The sample screens that appear in this document might differ slightly from the screens displayed by your system. Screen content varies based on the type of switch unit that you are using and the firmware versions and options that are installed.

CHAPTER 2

Browser-Based Interface Basics

Once you are properly logged in, the Blade OS Browser-Based Interface (BBI) appears in your Web browser's viewing window:

The screenshot displays the Blade OS BBI interface. At the top, the 'BLADE NETWORK TECHNOLOGIES' logo is on the left, and 'BLADE OS' is on the right. The toolbar contains tabs for 'CONFIGURE', 'STATISTICS', and 'DASHBOARD', with 'DASHBOARD' selected. Below the toolbar are buttons for 'Apply', 'Save', 'Revert', 'Diff', and 'Dump'. A message window shows a system notice: '45. Mar 2 19:06:31 172.20.254.36 NOTICE system: LR SFP+ inserted at port XGE1'. The navigation window shows a folder icon and the text 'BNT RackSwitch G8000'. The forms window displays the 'Switch Dashboard' with the following table:

Switch Name	
Switch Location	
Switch Type	Blade Network Technologies RackSwitch G8000
Switch Up Time	0 days, 16 hours, 26 minutes and 38 seconds.
Last Boot Time	6:11:22 Fri Mar 10, 2009 (reset from console)
Time and date	18:45:04 , 3/10/2009
Timezone Location	Americas-Barbados
Daylight Savings Time Status	disabled
MAC Address	00:22:00:ac:c4:00
IP Address	10.10.10.1
Hardware Revision	14
Switch Serial No	CH490800NN
HW Spare Part No	BAC-00017-00
Manufacturing Date	09/08
Software Rev	5.1.0 (FLASH image1)
Flash Configuration	FLASH image1, active configuration.
Unit Fans Status	Fans are in Forward AirFlow, Warning at 55 C and Recover at 80 C
Unit Temperature	Sensor 1: 40.0 C; Sensor 2: 43.0 C; Sensor 3: 40.0 C; Sensor 4: 45.0 C;
Unit Fans Speed	Fan 1: 9712 RPM; Fan 2: 2730 RPM; Fan 3: 9944 RPM; Fan 4: 9729 RPM; Fan 5: 2591 RPM;
Unit Power Supplies	Power Supply 1: On , Power Supply 2: On
Banner	

There are four main regions on the Blade OS BBI screen:

- The toolbar is used for selecting the context for your actions in the other windows.
- The navigation window is used for selecting particular items or features to act upon.
- The forms window is used for viewing or altering switch information.
- The message window is used for displaying the most recent switch `syslog` messages and events.

Toolbar

Context Tabs

The toolbar is used for setting the context for your actions in the application. There are three context tabs:

Configure	When selected, you can access the switch configuration forms. Configuration forms can be altered only if you are logged in using the administrator account. Select an item in the navigation window to display the desired configuration form in the forms window.
Statistics	When selected, you can view information about switch performance. Select an item in the navigation window to display the desired statistics in the forms window.
Dashboard	This context tab is selected by default when the BBI is first activated. When selected, basic switch information and status can be viewed in the forms window. Select an item in the navigation window to display the desired dashboard information in the forms window.

The selected context tab is highlighted, to remind you of the current context mode.

Commands

The following general commands are available on the toolbar:

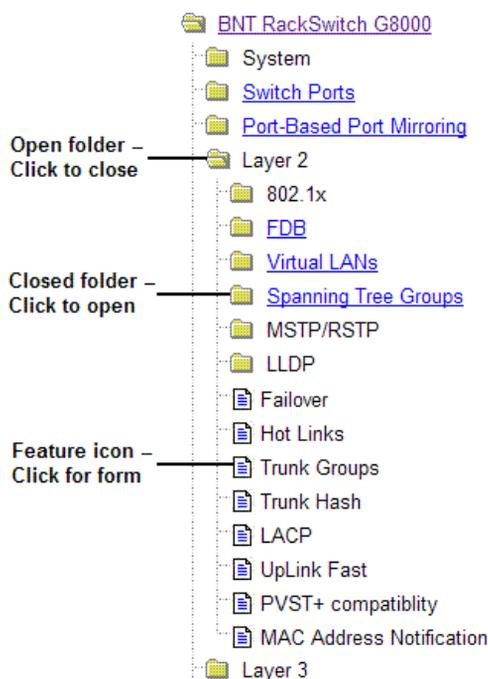
Save to Active Config	Saves the current configuration to the startup configuration block.
Save to Backup Config	Saves the current configuration to the backup configuration block.
Show Config	Opens a new Web-browser window that displays the running configuration.

Show Log	Opens a new Web-browser window that displays the most recent switch log messages. Close the log browser when finished.
Help	Opens a new Web-browser window that displays basic online help information. Close the Help browser when finished.
Logout	Log off the switch and exit the BBI.

Navigation Window

The navigation window is used for selecting a particular switch feature to act upon. Status, statistics, or configuration forms for the selected item will appear in the forms window, depending on the context chosen on the toolbar.

The navigation window contains a tree of folders, sub-folders, and feature icons:



You can click on any closed folder to open it and reveal its contents. Click on any open folder to close it. Click on any feature icon to load the appropriate status, statistics, or configuration form in the forms window.

Some folders also have forms. If the name of the folders is underlined, click on the name to display the appropriate form.

Forms Window

When a feature icon is selected on the navigation window, a status, statistics, or configuration form is displayed in the forms window. The exact nature of the form depends on the current context selected on the toolbar, as well as the type of information available. Not all feature icons have forms for all contexts.

Some forms display switch information such as settings, status, or statistics. Others allow you to make configuration changes to switch parameters.

Message Window

Switch log messages are generated by events such as login/logout activity, password changes, configuration changes, and switch reboot. The BBI records the most recent messages and displays each one briefly in the message window. When the last message has been displayed, the cycle is repeated.

To view all messages at the same time, select the Show Log command on the toolbar. A new Web-browser window will be opened to display the log information. Close the window when finished.

CHAPTER 3

Configuring the Switch

The Blade OS Browser-Based Interface (BBI) can be used to view and change switch configuration parameters. The same configuration parameters that are available through the switch's command-line interface are present on the BBI configuration forms.

The following provides a basic outline for switch configuration. You should first be familiar with configuration as covered in the Blade OS *Command Reference* manual.

Note – You must be logged in using the administrator account in order to change switch configuration settings.

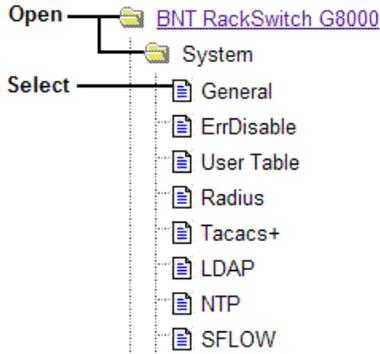
Configuration Steps

Follow these basic steps for viewing or configuring switch parameters:

1. Click the Configure context tab in the BLADE OS toolbar:



2. Select a feature icon in the navigation window. For example:



3. View or make changes to the settings shown in the forms window. For example:

BLADE OS NETWORK TECHNOLOGIES

CONFIGURE STATISTICS DASHBOARD

Apply Save Revert Diff Dump Show Log Help Logout

BNT RackSwitch G8000

System

- General
- ErrDisable
- User Table
- Radius
- Tacacs+
- LDAP
- NTP
- SFLOW
- Boot
- Syslog/Trap Features
- Config/Image Control
- Management Network
- Transceiver
- Switch Ports
- Port-Based Port Mirroring
- Layer 2
- Layer 3
- QoS
- Access Control

Switch Management Processor Configuration

Switch IP Address	10.0.0.1
Switch IP Subnet Mask	255.255.0.0
Enable/Disable DHCP for Interface 1	Enabled
Enable/Disable Console output of syslog messages	Enabled
Enable/Disable Host Name	Disabled
Syslog Host IP Address	Enabled
Severity of Syslog Host	log debug 7
Facility of Syslog Host	local 0
Second Syslog Host IP Address	0.0.0.0
Severity of Second Syslog Host	log debug 7
Facility of Second Syslog Host	local 0

Note – Fields which must be configured for proper switch operations are highlighted on the forms in GREEN type. Items which load other forms when selected are underlined.

4. Click the Submit button on the bottom of the form to submit the form contents to the switch.

Using the BBI to Load Switch Software

You can use the Browser-Based Interface to load software onto the G8000. The software image to load can reside in one of the following locations:

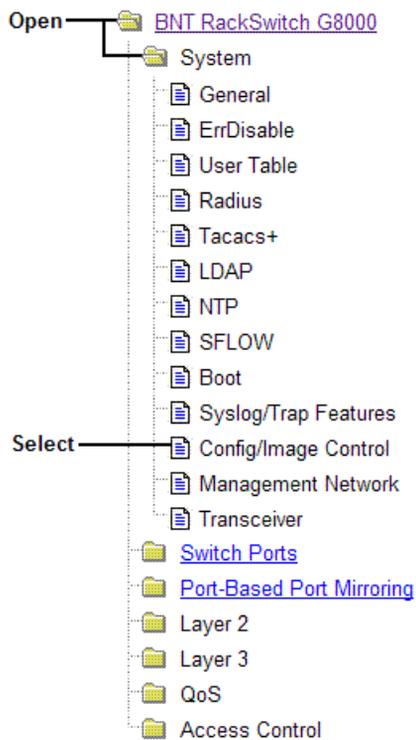
- FTP server
- TFTP server
- Local computer

After you log onto the BBI, perform the following steps to load a software image:

1. Click the Configure context tab in the BLADE OS toolbar:



2. In the Navigation Window, select System > Config/Image Control.



The Switch Image and Configuration Management page appears.

Switch Image and Configuration Management	
Image 1 Version	version 5.1.0, downloaded 2:10:14 Fri Mar 10, 2009
Image 2 Version	version 1.1.1
Boot Version	version 5.1.0
Active Image Version	5.1.0
Next Boot Image Selection	image 1 ▾
Active Configuration Block	active config
Next Boot Configuration Block Selection	active config ▾
Next CLI Boot Mode Selection	ISCLI ▾
Prompt for selectable boot mode	DISABLE ▾
FTP/TFTP Settings	
Hostname or IP Address of FTP/TFTP server	100.20.10.1
Username for FTP Server or Blank for TFTP Server	
Password for FTP Server	
Image Settings	
Image for Transfer	image 1 ▾
Image Filename (on server)	5.1.0_os.img <input type="button" value="Get Image"/> <input type="button" value="Put Image"/>
Image Filename (on HTTP Client)	<input type="button" value="Browse_"/> <input type="button" value="Download via Browser"/>

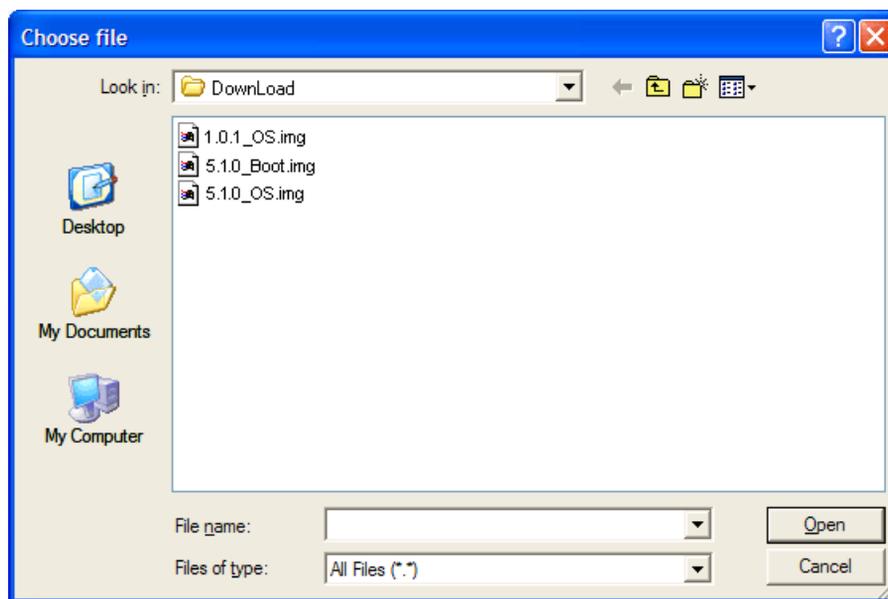
- If you are loading software from your computer (HTTP client), go to Step 4. If you are loading software from a FTP/TFTP server, enter the server's information in the FTP/TFTP Settings section.

FTP/TFTP Settings	
Hostname or IP Address of FTP/TFTP server	100.20.10.1
Username for FTP Server or Blank for TFTP Server	
Password for FTP Server	

4. In the Image Settings section, select the image version you want to replace (Image for Transfer).

Image Settings	
Image for Transfer	image 1 ▾
Image Filename (on server)	5.1.0_os.img <input type="button" value="Get Image"/> <input type="button" value="Put Image"/>
Image Filename (on HTTP Client)	<input type="button" value="Browse..."/> <input type="button" value="Download via Browser"/>

- If you are loading software from a FTP/TFTP server, enter the file name and click Get Image.
- If you are loading software from your computer, click Browse. In the File Download Dialog, select the file and click OK. Click Download via Browser.



Once the image has loaded, the page refreshes to show the new software.

CHAPTER 4

Viewing Statistics

The Blade OS Browser-Based Interface (BBI) can be used to view a variety of switch performance statistics. The same statistics that are available through the switch's command-line interface are present on the BBI statistics forms.

The following provides a basic outline for viewing statistics. You should first be familiar with available statistics as covered in the Blade OS *Command Reference* manual.

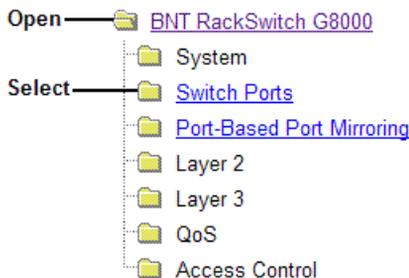
Steps for Displaying Statistics

Follow these basic steps for viewing switch statistics:

1. Select the Statistics context tab in the Blade OS toolbar:



2. Select a feature icon or underlined folder in the navigation window. For example:



3. View the statistics in the forms window. For example:

The screenshot shows the BLADE OS web interface. The top navigation bar includes 'CONFIGURE', 'STATISTICS' (selected), and 'DASHBOARD'. Below the navigation bar, there are buttons for 'Apply', 'Save', 'Revert', 'Diff', and 'Dump', along with 'Show Log', 'Help', and 'Logout'. A status bar at the top displays the date and time '7. Mar 2 4:00:19' and a log message: '192.168.1.211 NOTICE mgmt admin(admin) login on Console'.

The main content area is titled 'Switch Ports Statistics Summary' and displays a table with the following data:

Switch Port	InOctets	OutOctets	Total Errors
1	0	0	0
2	49748542	3331325	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0
7	0	0	0
8	0	0	0
9	0	0	0
10	0	0	0
11	0	0	0
12	0	0	0

The left sidebar shows a tree view of the configuration hierarchy for 'BNT RackSwitch G8000', including folders for 'System', 'Switch Ports', 'Port-Based Port Mirroring', 'Layer 2', 'Layer 3', 'QoS', and 'Access Control'. The 'Switch Ports' folder is currently selected.

Note – Items which load other forms when selected are [underlined](#).

CHAPTER 5

The Dashboard

The Blade OS Browser-Based Interface (BBI) can be used to view the present settings and operating status of a variety of switch features. The same information available through the switch's command-line interface is present on the dashboard forms.

The following provides a basic outline for viewing the dashboard forms. You should first be familiar with configuration as covered in the Blade OS *Command Reference* manual.

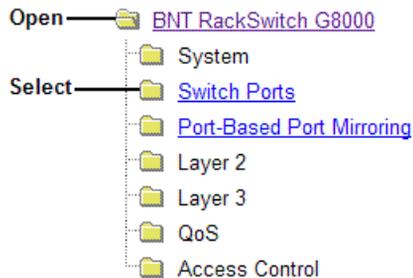
Steps for Displaying Dashboards

Follow these basic steps for viewing switch dashboard forms:

1. Select the Dashboard context tab in the BBI toolbar:



2. Select a feature icon in the navigation window. For example:



3. View information shown in the forms window. For example:

The screenshot shows the BLADE OS interface with the 'DASHBOARD' tab selected. The main content area is titled 'Switch Ports Dashboard' and displays a table of switch ports. On the left, a navigation tree shows the hierarchy: BNT RackSwitch G8000 > System > Switch Ports > Port-Based Port Mirroring > Layer 2 > Layer 3 > QoS > Access Control. The table below shows three ports, each with a status icon (a green square with a white border) and detailed configuration information.

Status	Switch Port Info	Operational Status	Speed Duplex FlowCtl	Input Frames Output Frames	LinkState Changes Total Errors
	<u>1</u> : name: stp: DISABLED ErrDisable Recovery: disabled Flood Blocking: disabled FDB Learning: enabled Tagging: disabled PVID: 1 VLANs: 1	operational	ANY/Both/Both	0 0	0 0
	<u>2</u> : name: stp: FORWARDING ErrDisable Recovery: disabled Flood Blocking: disabled FDB Learning: enabled Tagging: disabled PVID: 1 VLANs: 1	operational	1000/Full/Both	464763 44521	1 0
	<u>3</u> : name: stp: DISABLED ErrDisable Recovery: disabled Flood Blocking: disabled FDB Learning: enabled Tagging: disabled PVID: 1 VLANs: 1	operational	ANY/Both/Both	0 0	0 0

Note – Items which load other forms when selected are [underlined](#).