

BLADE OS™

# BBI Quick Guide

HP 10Gb Ethernet BL-c Switch

Version 5.1 Advanced Functionality Software

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Part Number: BMD00120, September 2009

**BLADE**  
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# Preface

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BLADE OS 5.1 Browser-Based Interface (BBI) software is included with the HP 10Gb Ethernet BL-c Switch. 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 Browser-Based Interface for Advanced Functionality Software (AFS) release 5.1 for the HP 10Gb Ethernet BL-c Switch (software part number 485194-B21).

## Who Should Use This Book

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

## Related Documentation

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For documentation on installing the switch physically, see the *HP 10Gb Ethernet BL-c Switch User Guide*.

For details about the switch information, statistics, and configuration parameters available using the BBI, see the *BLADE OS 5.1 Command Reference* and *BLADE OS 5.1 Application Guide*.

# Typographic Conventions

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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#
<b>AaBbCc123</b>	This bold type appears in command examples. It shows text that must be typed in exactly as shown.	Main# <b>sys</b>
<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# <b>telnet</b> <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# <b>ls</b> [-a]
AaBbCc123	This block type depicts menus, buttons, and other controls that appear in Web browsers and other graphical interfaces.	Click the <b>Save</b> button.

# CHAPTER 1

## Getting Started

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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

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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

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**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 5.1 Command Reference*.

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## Requirements

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- HP 10Gb Ethernet BL-c Switch (HP 10Gb switch)
- Installed switch software
- PC or workstation with network access to the switch's management interface, as configured using the management module
- 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

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

### IP Interfaces

At least one IP interface must be configured on the switch. This is usually done from the command line interface during first-time switch set up. Each IP interface address provides a point of access for switch management.

For complete information about configuring IP interfaces, see your *HP 10Gb Ethernet BL-c Switch User 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:

```
>> Main# /cfg/sys/access/http disable|enable
```

By default, secure BBI access is disabled. If you need to enable access, use the following command from the command line interface:

```
>> Main# /cfg/sys/access/https/https enable
```

The default TCP port to use for BBI access is port 80. To change the port number, use the following command:

```
>> Main# /cfg/sys/access/wport <TCP port number>
```

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

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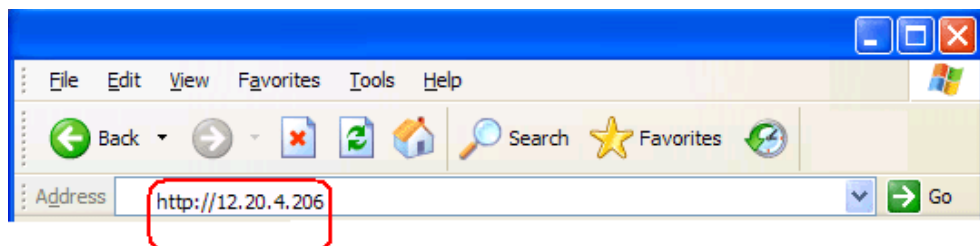
## Starting the BBI

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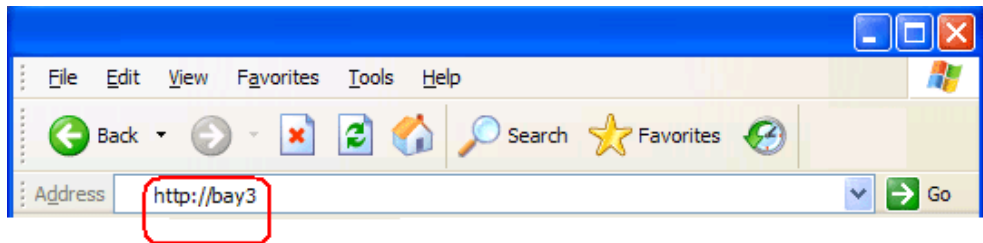
When the switch and browser set up is done, follow these steps to launch the BBI:

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 12.20.4.206  
You could enter the following:

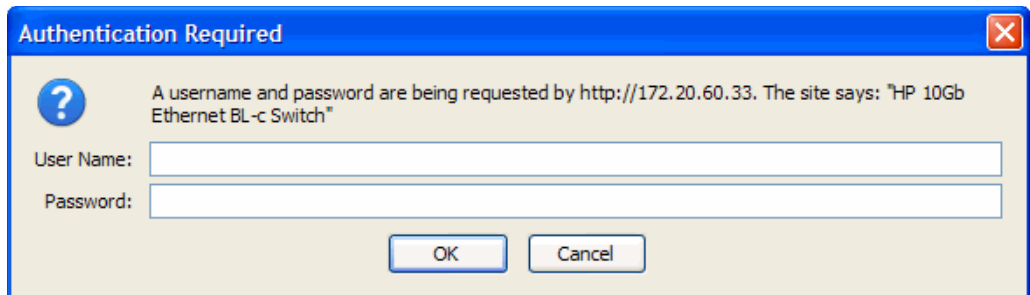


If the IP interface's address has a name on your local domain name server, you could enter the name instead. For example, with Internet Explorer, you could enter the following:



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 *BLADE OS 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.

The screenshot shows a web browser window displaying the HP BBI Dashboard. The browser's address bar shows the URL `http://12.20.4.206/`. The dashboard has a blue header with the HP logo and navigation buttons for 'CONFIGURE', 'STATISTICS', and 'DASHBOARD'. Below the header, there are links for 'Apply', 'Save', 'Revert', 'Diff', and 'Dump', along with a 'Show Log - Help - Quit' link. A status bar at the top of the dashboard displays the message: '24. Jan 11 22:46:49 172.20.60.33 NOTICE mgmt: admin(Admin) login from BBI.' The main content area is titled 'Switch Dashboard' and contains a table of system information. On the left side, there is a navigation tree with a folder icon for 'HP 10Gb Ethernet BL-c Switch' and sub-folders for 'System', 'Switch Ports', 'Port-Based Port Mirroring', 'Layer 2', 'RMON Menu', 'Layer 3', 'QoS', and 'Access Control'.

Switch Name	
Switch Location	
Switch Type	HP 10Gb Ethernet BL-c Switch
Rack Name	URack
Enclosure Name	SGH642X98W
Slot	3
System temperature	32.0C
Switch Up Time	0 days, 0 hours, 38 minutes and 39 seconds.
Last Boot Time	6:28:12 Thu Jan 12, 2009 (reset by WEB-UI)
Time and date	23:06:29 , 1/11/2009
Timezone Location	Americas-USA-PacificTime
Daylight Savings Time Status	disabled
MAC Address	00:22:00:7b:1a:00
IP Address	0.0.0.0
Management Port MAC Address	00:22:00:7b:1a:01
Management Port IP Address	12.20.4.206
Hardware Revision	0A
Switch Serial No	USP90303AW
Hardware Part No	445860-B21
HW Spare Part No	447116-001
Software Rev	5.1.2-Advanced Functionality (FLASH image2)
Banner	

**Note** – There may be a slight delay while the Dashboard page is initializing. You should not stop the browser while loading is in progress. When loading is complete, a folder icon for the switch displays in the left-hand BBI window. Click this folder and a tree of folders displays.



## 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 shows the HP 10Gb Ethernet BL-c Switch Dashboard. The interface is divided into several sections:

- Toolbar:** Contains buttons for CONFIGURE, STATISTICS, and DASHBOARD, along with a status bar showing 'Apply | Save | Revert | Diff | Dump'.
- Message window:** Displays a notification: '24. Jan 11 22:46:49 172.20.60.33 NOTICE mgmt: admin(Admin) login from BBI.' and links for 'Show Log - Help - Quit'.
- Navigation window:** A tree view on the left showing the following structure:
  - HP 10Gb Ethernet BL-c Switch
    - System
    - Switch Ports
    - Port-Based Port Mirroring
    - Layer 2
    - RMON Menu
    - Layer 3
    - QoS
    - Access Control
- Forms window:** A table displaying the following details:

Switch Name	
Switch Location	
Switch Type	HP 10Gb Ethernet BL-c Switch
Rack Name	URack
Enclosure Name	SGH642X98W
Slot	3
System temperature	32.0C
Switch Up Time	0 days, 0 hours, 38 minutes and 39 seconds.
Last Boot Time	6:28:12 Thu Jan 12, 2009 (reset by WEB-UI)
Time and date	23:06:29 , 1/11/2009
Timezone Location	Americas-USA-PacificTime
Daylight Savings Time Status	disabled
MAC Address	00:22:00:7b:1a:00
IP Address	0.0.0.0
Management Port MAC Address	00:22:00:7b:1a:01
Management Port IP Address	12.20.4.206
Hardware Revision	0A
Switch Serial No	USP90303AW
Hardware Part No	445860-B21
HW Spare Part No	447116-001
Software Rev	5.1.2-Advanced Functionality (FLASH image2)
Banner	

There are four main regions on the 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

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### Context Tabs

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

---

<b>Configure</b>	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.
<b>Statistics</b>	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.
<b>Dashboard</b>	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:

---

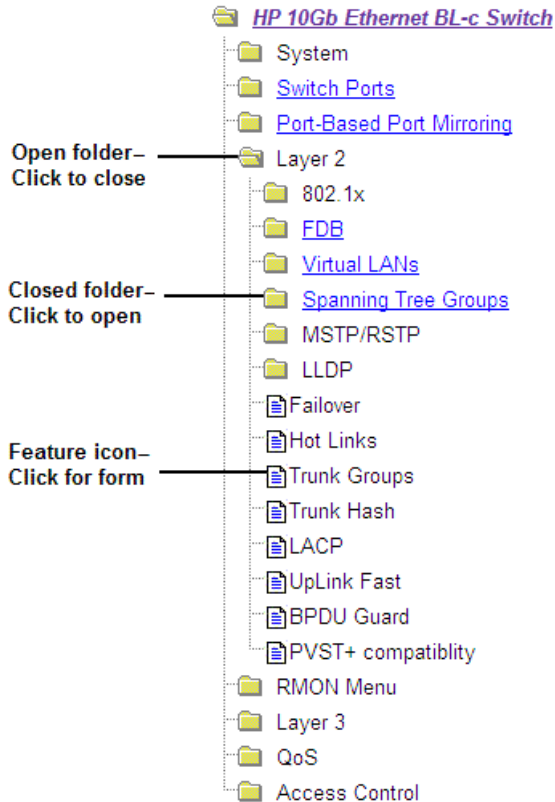
<b>Apply</b>	Pending configuration changes do not take effect until you click the <b>Apply</b> command. Once applied, all changes take effect on the switch immediately. If you do not save the changes, however, they will be lost the next time the switch is rebooted.
<b>Save</b>	Writes applied configuration changes to non-volatile flash memory on the switch.
<b>Revert</b>	Removes pending configuration changes made since the last <b>Apply</b> command.
<b>Diff</b>	Show any pending configuration changes.
<b>Dump</b>	Displays the running configuration of the switch in a separate browser window.
<b>Show Log</b>	Opens a new Web-browser window for displaying the most recent switch log messages. Close the log browser when finished.
<b>Help</b>	Displays basic Help information in a separate browser window. Close the Help window when finished.
<b>Quit</b>	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, click 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.

For a list of `syslog` messages, see your *BLADE OS 5.1 Command Reference*.



## CHAPTER 3

# Configuring the Switch

---

The 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 sections provide a basic outline for switch configuration. You should be familiar with configuration commands as covered in the *BLADE OS Command Reference*.

---

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

---

## Configuration Steps

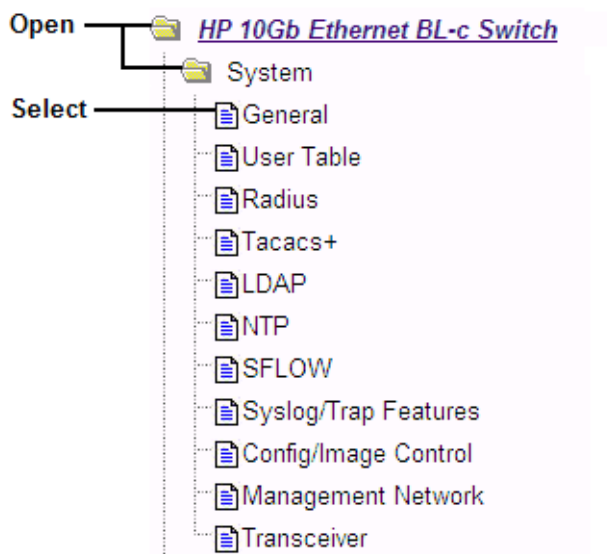
---

Follow these basic steps for viewing or configuring switch parameters:

1. Click the Configure context tab in the BBI 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, as shown in the example below:

Switch Management Processor Configuration	
Switch IP Address	0.0.0.0
Switch IP Subnet Mask	0.0.0.0
Enable/Disable BOOTP for IP Management	Enabled
Enable/Disable DHCP for Management Interface	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

**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.

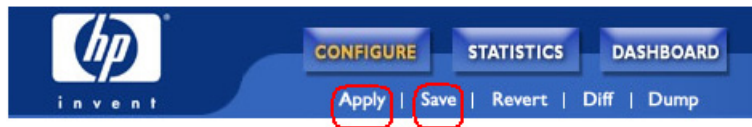
4. Submit, reset, or delete the form contents using buttons on the bottom of the form.

---

<b>Submit</b>	When selected, the form is sent to the switch. Any configuration changes are placed in the “pending” state and do not take effect until you click the toolbar <b>Apply</b> command.
<b>Reset</b>	When selected, the form fields are reset to their last submitted values.
<b>Delete</b>	This button is available for configuration items that can be deleted. When selected, the featured item is slated to be removed from the switch configuration database. The item is not actually deleted, however, until you click the Toolbar <b>Apply</b> command.

---

5. Apply and save your changes using the Toolbar commands.



Pending configuration changes (including deletions) do not take effect until you click the **Apply** command.

Applied changes take effect on the switch immediately, but will be lost the next time the switch is rebooted, unless the you click the **Save** command.

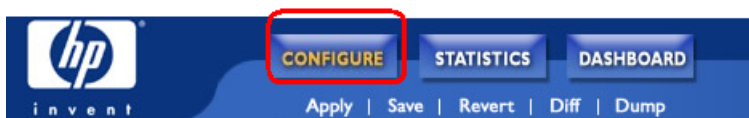
## Using the BBI to Load Switch Software

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

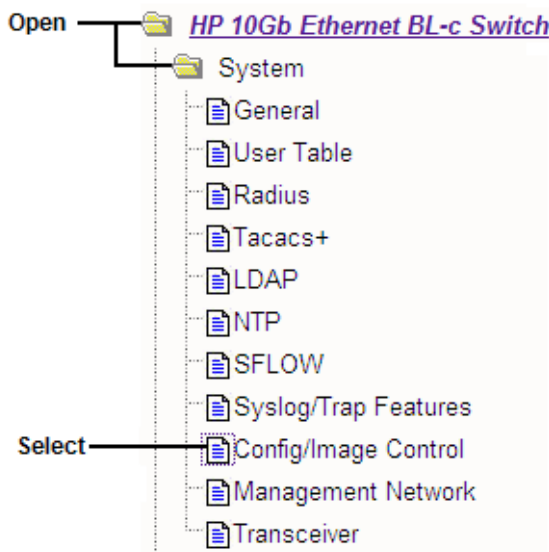
- FTP server
- TFTP server
- Local computer

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

1. Click the **Configure** context tab in the BBI Toolbar:



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



The Switch Image and Configuration Management form appears.

Switch Image and Configuration Management	
Image 1 Version	version 1.1.50 NormalPanel
Image 2 Version	version 5.1.2-Advanced Functionality, downloaded 22:26:12 Wed Jan 11, 2000 NormalPanel
Boot Version	version 5.1.2
Active Image Version	5.1.2-Advanced Functionality
Next Boot Image Selection	image 2 ▾
Active Configuration Block	active config
Next Boot Configuration Block Selection	active config ▾
Next CLI Boot Mode Selection	BLADEOS CLI ▾
Prompt for selectable boot mode	ENABLE ▾
<b>FTP/TFTP Settings</b>	
Hostname or IP Address of FTP/TFTP server	100.10.20.1
Username for FTP Server or Blank for TFTP Server	
Password for FTP Server	
Port for Transfer	MGT ▾
<b>Image Settings</b>	
Image for Transfer	image 1 ▾
Image Filename (on server)	5.1.0_OS_img
	Get Image Put Image
Image Filename (on HTTP Client)	Browse... Download via Browser

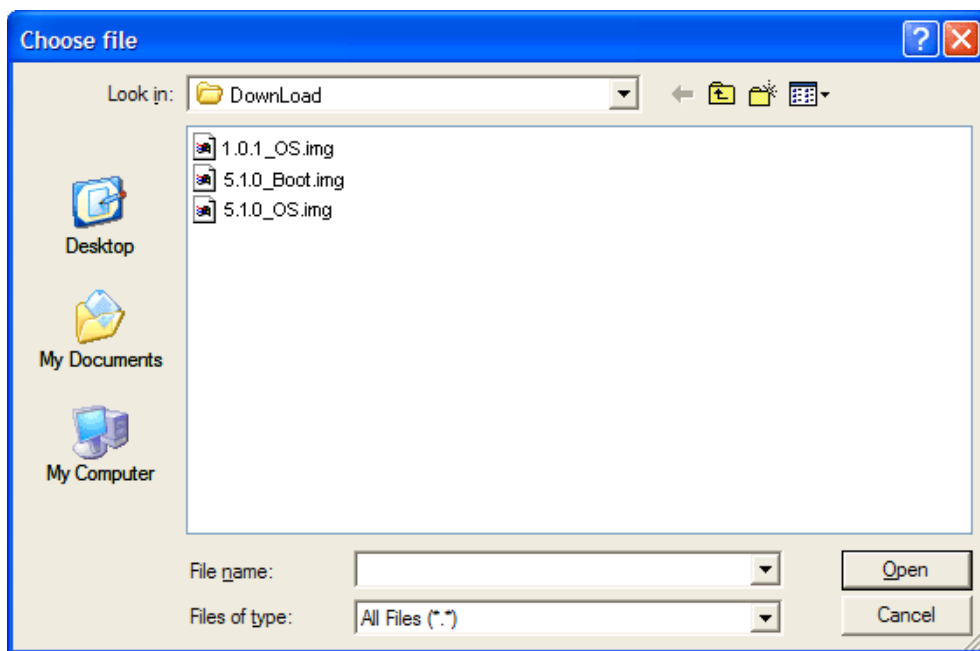
- If you are loading software from your computer (HTTP client), go to Step 4. If you are loading software from a FTP/TFTP server, enter the server's information in the FTP/TFTP Settings section.

<b>FTP/TFTP Settings</b>	
Hostname or IP Address of FTP/TFTP server	100.10.20.1
Username for FTP Server or Blank for TFTP Server	
Password for FTP Server	
Port for Transfer	MGT ▾

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

<u>Image Settings</u>	
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

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The 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.

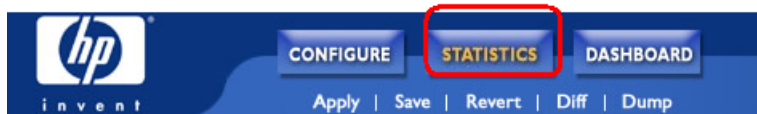
The following provides a basic outline for viewing statistics. You should be familiar with available statistics as covered in the *BLADE OS 5.1 Command Reference*.

## Steps for Displaying Statistics

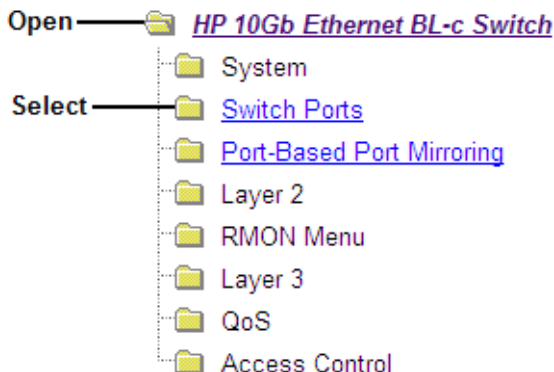
---

Follow these basic steps for viewing switch statistics:

1. Click the **Statistics** context tab in the BBI Toolbar:



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



- View the statistics in the Forms window, as shown in the example below:

The screenshot shows the HP i n v e n t management interface. The top navigation bar includes 'CONFIGURE', 'STATISTICS', and 'DASHBOARD' tabs. Below the navigation bar are buttons for 'Apply', 'Save', 'Revert', 'Diff', and 'Dump', along with 'Show Log - Help - Quit'. The main content area is titled 'Switch Ports Statistics Summary' and contains a table with the following data:

Switch Port	InOctets	OutOctets	Total Errors
<u>1</u>	0	0	0
<u>2</u>	0	0	0
<u>3</u>	0	0	0
<u>4</u>	0	0	0
<u>5</u>	0	0	0
<u>6</u>	0	0	0
<u>7</u>	0	0	0
<u>8</u>	0	0	0
<u>9</u>	0	0	0
<u>10</u>	0	0	0
<u>11</u>	0	0	0
<u>12</u>	0	0	0

A left-hand navigation pane shows a tree structure with folders for 'System', 'Switch Ports', 'Port-Based Port Mirroring', 'Layer 2', 'RMON Menu', 'Layer 3', 'QoS', and 'Access Control'. The 'Switch Ports' folder is currently selected.

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**Note** – Items which load other forms when selected are underlined.

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## CHAPTER 5

# The Dashboard

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The 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 be familiar with configuration as covered in the *BLADE OS 5.1 Command Reference*.

## Steps for Displaying Dashboards

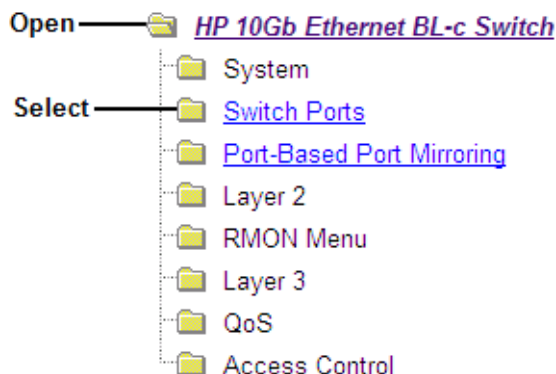
---

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, as shown in the example below:

The screenshot shows the HP 10Gb Ethernet BL-c Switch configuration interface. The top navigation bar includes 'CONFIGURE', 'STATISTICS', and 'DASHBOARD' buttons, along with 'Apply | Save | Revert | Diff | Dump' and 'Show Log - Help - Quit' options. The left sidebar shows a tree view with folders for System, Switch Ports, Port-Based Port Mirroring, Layer 2, RMON Menu, Layer 3, QoS, and Access Control. The main content area is titled 'Switch Ports Dashboard' and contains a table with the following data:

Status	Switch Port Info	Operational Status	Speed Duplex FlowCtl	Input Frames Output Frames	LinkState Changes Total Errors
	<u>1</u> : name: Downlink1 stp: DISABLED rmon: disabled Flood Blocking: disabled FDB Learning: enabled tagging: disabled PVID: 1 VLANs:1	offline	1000 Full Both	0 0	0 0
	<u>2</u> : name: Downlink2 stp: FORWARDING rmon: disabled Flood Blocking: disabled FDB Learning: enabled tagging: disabled PVID: 1 VLANs:1	operational	1000 Full Both	0 22	1 0
	<u>3</u> : name: Downlink3 stp: DISABLED rmon: disabled Flood Blocking: disabled FDB Learning: enabled tagging: disabled PVID: 1 VLANs:1	offline	1000 Full Both	0 0	0 0

**Note** – Items which load other forms when selected are underlined.