



# Alteon OS<sup>™</sup> BBI Quick Guide

Nortel 10Gb Uplink Ethernet Switch Module for IBM BladeCenter<sup>®</sup>

Version 1.2

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Solutions by

**NORTEL**

**BLADE**  
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# Preface

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Alteon OS Browser-Based Interface (BBI) software is included with the Nortel 10Gb Uplink Ethernet Switch Module (GbE Switch Module). 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 Alteon OS Browser-Based Interface.

## Who Should Use This Book

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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 GbE Switch Module, 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 *Installation Guide* for your GbE Switch Module.

For details about the switch information, statistics, and configuration parameters available using the Alteon OS BBI, see the Alteon 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#
<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]

## How to Get Help

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If you need help, service, or technical assistance, see the "Getting help and technical assistance" chapter in the Nortel 10Gb Uplink Ethernet Switch Module for IBM BladeCenter *Installation Guide*.

## CHAPTER 1

# Getting Started

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This chapter briefly describes the software features and requirements for the Alteon 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 Alteon 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 *Alteon OS Command Reference* for the Nortel 10Gb Uplink Ethernet Switch Module for IBM BladeCenter.

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## Requirements

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- GbE Switch Module
- Installed Alteon OS 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 GbE Switch Module.

### IP Interfaces

At least one IP interface must be configured on the switch. This is configured from the management module and not the command-line interface. The management module assigns the management IP address by default, starting at 192.168.70.127 for I/O module slot 1 through 192.168.70.130 for I/O module slot 4.

Each IP interface address provides a point of access for Alteon OS switch management. The default management interface is 128, which allows access to Alteon OS switch management via the management module network only.

For complete information about configuring IP interfaces, see your GbE Switch Module *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 GbE Switch Module command-line interface:

```
>> Main# /cfg/sys/access/http <disable | enable (or just d|e)>
```

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

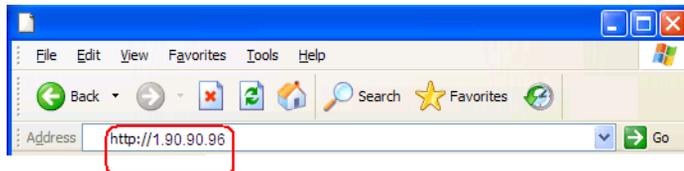
## Starting the BBI

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

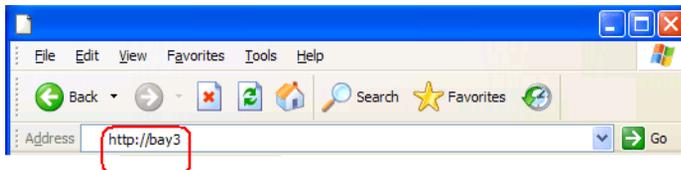
1. **Start your Web browser.**
2. **Enter the switch IP interface address in the Web browser's URL field.**

For example, consider an IP interface with a network IP address of 1.90.90.96

You could enter the following:

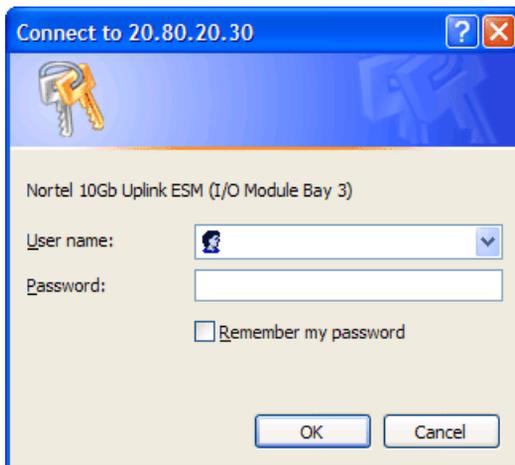


If the IP interface's address has a name on your local domain name server, you could enter the name instead. For example, with Internet Explorer, you could enter the following:



### 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 Alteon OS *Command Reference* manual.

#### 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 Alteon OS BBI Dashboard. The browser's address bar shows the URL `http://1.90.90.96`. The dashboard header includes the Alteon OS logo and navigation tabs for CONFIGURE, STATISTICS, and DASHBOARD. Below the header, there are buttons for Apply, Save, Revert, Diff, and Dump, along with links for Show Log, Help, and Logout. The main content area is titled "Switch Dashboard" and displays a table of system information for a "Nortel 10Gb Uplink Ethernet Switch".

Switch Name	
Switch Location	
Switch Type	Nortel 10Gb Uplink Ethernet Switch Module
Switch Up Time	12 days, 23 hours, 56 minutes and 29 seconds.
Last Boot Reason	(reset from Telnet)
Time and date	1:08:13 , 1/4/2007
Timezone Location	
Daylight Savings Time Status	disabled
MAC Address	00:16:ca:99:c6:00
IP Address	1.90.90.96
Flash Configuration	FLASH image2, active configuration.
PCBA Part Number	317857-A
FAB Number	EL4512011
Serial Number	YJ1JXF622024
Manufacturing Date	0606
Hardware Revision	0
PLD Firmware Version	7.0
Temperature Sensor 1 (Warning)	43.5 C (Warn at 77.0 C/Recover at 72.0 C)
Temperature Sensor 2 (Shutdown)	40.5 C (Warn at 90.0 C/Recover at 80.0 C)
Software Rev	1.2.0
Enabled Software features	none
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 BladeCenter 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 Alteon OS Browser-Based Interface (BBI) appears in your Web browser's viewing window:

The screenshot displays the Alteon OS BBI interface. At the top, there is a toolbar with buttons for CONFIGURE, STATISTICS, and DASHBOARD. Below the toolbar are links for Apply, Save, Revert, Diff, and Dump. On the right side, there is a Message Window and the Alteon OS logo with links for Show Log, Help, and Logout. The main content area is titled "Switch Dashboard" and contains a table with various system parameters. At the bottom left, there is a Navigation Window, and at the bottom right, there is a Forms Window.

Parameter	Value
Switch Name	
Switch Location	
Switch Type	Nortel 10Gb Uplink Ethernet Switch Module
Switch Up Time	12 days, 23 hours, 56 minutes and 29 seconds.
Last Boot Reason	(reset from Telnet)
Time and date	1:08:13 , 1/4/2007
Timezone Location	
Daylight Savings Time Status	disabled
MAC Address	00:16:ca:99:c6:00
IP Address	1.90.90.96
Flash Configuration	FLASH image2, active configuration.
PCBA Part Number	317857-A
FAB Number	EL4512011
Serial Number	YJ1JXF622024
Manufacturing Date	0606
Hardware Revision	0
PLD Firmware Version	7.0
Temperature Sensor 1 (Warning)	43.5 C (Warn at 77.0 C/Recover at 72.0 C)
Temperature Sensor 2 (Shutdown)	40.5 C (Warn at 90.0 C/Recover at 80.0 C)
Software Rev	1.2.0
Enabled Software features	none
Banner	

There are four main regions on the Alteon OS 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:

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<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.

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

## Commands

The following general commands are available on the toolbar:

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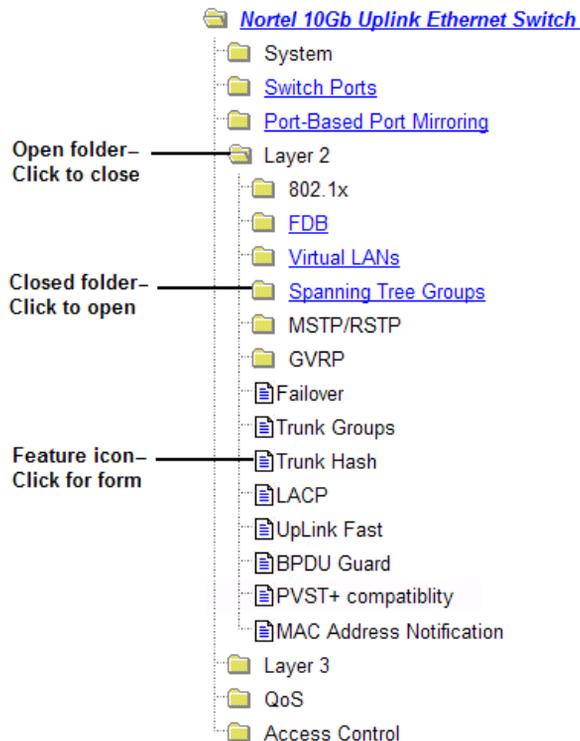
<b>Apply</b>	Pending configuration changes do not take effect until you click the <b>Apply</b> command. Once applied, all changes take effect on the switch immediately. If you do not save the changes, however, they will be lost the next time the switch is rebooted.
<b>Save</b>	Writes applied configuration changes to non-volatile flash memory on the switch.
<b>Revert</b>	Removes pending configuration changes made since the last <b>Apply</b> command. Use this command to remove pending configuration changes made since the last <b>Apply</b> command.
<b>Diff</b>	Show any pending configuration changes.
<b>Dump</b>	Generates a dump of critical state information in the switch.
<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>	Opens a new Web-browser window for displaying the basic online help information. Close the help browser when finished.
<b>Logout</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

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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

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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.

For a list of `syslog` messages, see your Alteon OS *Command Reference* manual.

## CHAPTER 3

# Configuring the Switch

---

The Alteon 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 Alteon OS *Command Reference* manual.

---

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

---

## Configuration Steps

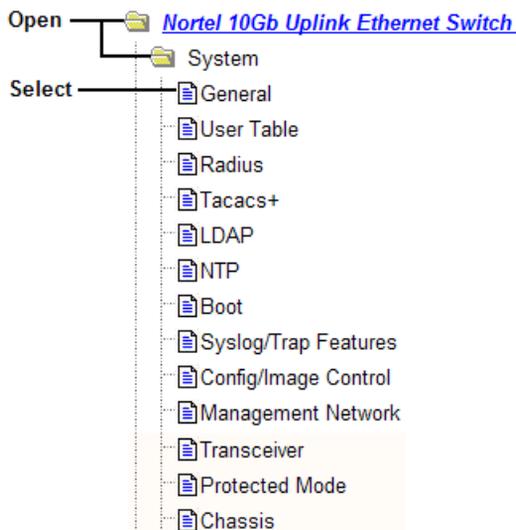
---

Follow these basic steps for viewing or configuring switch parameters:

1. Click the Configure context tab in the Alteon 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:

The screenshot displays the Alteon OS configuration interface for the 'Switch Management Processor Configuration'. The interface includes a navigation menu on the left and a main configuration area on the right. The configuration area contains several fields and dropdown menus, with the 'Syslog Host IP Address' dropdown menu highlighted by a red box. The fields and their values are as follows:

Field	Value
Switch IP Address	10.90.90.96
Switch IP Subnet Mask	255.255.255.0
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
Current Date	10/13/2007
Current Time	13:06:13

**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.

- Submit** 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 **Apply** command.
- Reset** When selected, the form fields are reset to their last submitted values.
- Delete** 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 **Apply** 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 GbE Switch Module. The software image to load can reside in one of the following locations:

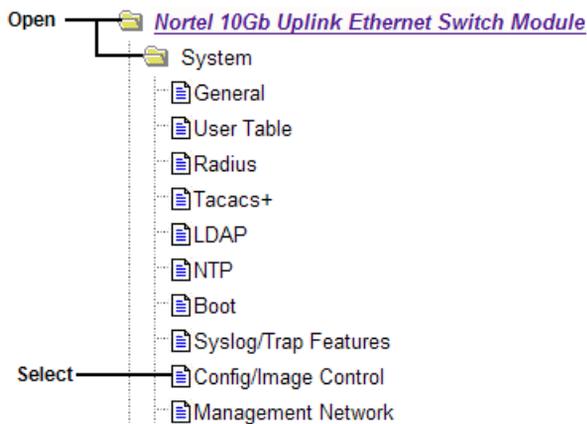
- FTP server
- TFTP server
- Local computer

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

### 1. Click the Configure context tab in the Alteon 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 1.2.0, downloaded 16:51:09 Sun Jan 8, 2007								
Image 2 Version	version 1.2.1, downloaded 14:08:11 Fri Jan 6, 2007								
Boot Version	version 1.2.0								
Active Image Version	1.2.0								
Next Boot Image Selection	image 1 <input type="button" value="v"/>								
<table border="1"> <tr> <td>Active Configuration Block</td> <td>active config</td> </tr> <tr> <td>Next Boot Configuration Block Selection</td> <td>active config <input type="button" value="v"/></td> </tr> <tr> <td>Next CLI Boot Mode Selection</td> <td>AOS CLI <input type="button" value="v"/></td> </tr> <tr> <td>Prompt for selectable boot mode</td> <td>DISABLE <input type="button" value="v"/></td> </tr> </table>		Active Configuration Block	active config	Next Boot Configuration Block Selection	active config <input type="button" value="v"/>	Next CLI Boot Mode Selection	AOS CLI <input type="button" value="v"/>	Prompt for selectable boot mode	DISABLE <input type="button" value="v"/>
Active Configuration Block	active config								
Next Boot Configuration Block Selection	active config <input type="button" value="v"/>								
Next CLI Boot Mode Selection	AOS CLI <input type="button" value="v"/>								
Prompt for selectable boot mode	DISABLE <input type="button" value="v"/>								
<table border="1"> <tr> <th colspan="2">FTP/TFTP Settings</th> </tr> <tr> <td>Hostname or IP Address of FTP/TFTP server</td> <td>100.10.20.1</td> </tr> <tr> <td>Username for FTP Server or Blank for TFTP Server</td> <td></td> </tr> <tr> <td>Password for FTP Server</td> <td></td> </tr> </table>		FTP/TFTP Settings		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	
FTP/TFTP Settings									
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									
<table border="1"> <tr> <th colspan="2">Image Settings</th> </tr> <tr> <td>Image for Transfer</td> <td>image 1 <input type="button" value="v"/></td> </tr> <tr> <td>Image Filename (on server)</td> <td>1.2.1_OS.img <input type="button" value="Get Image"/> <input type="button" value="Put Image"/></td> </tr> <tr> <td>Image Filename (on HTTP Client)</td> <td><input type="button" value="Browse..."/> <input type="button" value="Download via Browser"/></td> </tr> </table>		Image Settings		Image for Transfer	image 1 <input type="button" value="v"/>	Image Filename (on server)	1.2.1_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"/>
Image Settings									
Image for Transfer	image 1 <input type="button" value="v"/>								
Image Filename (on server)	1.2.1_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"/>								

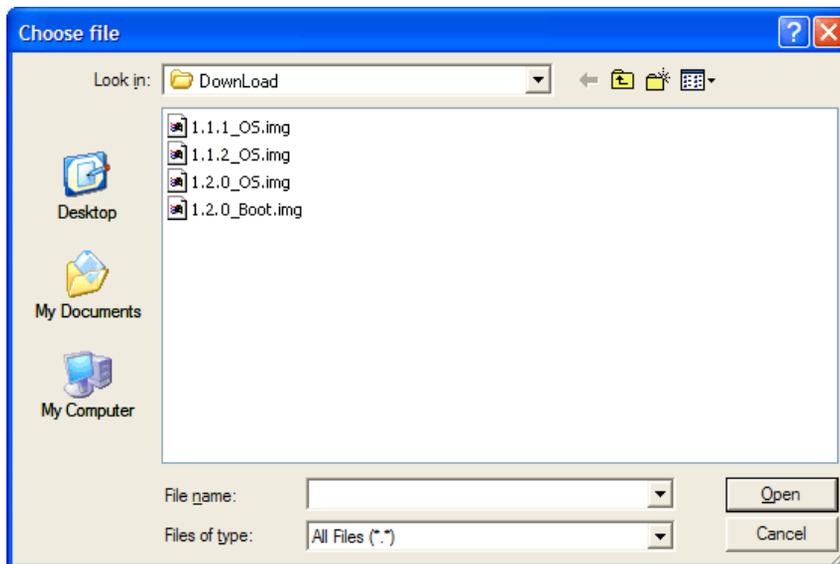
3. If you are loading software from your computer (HTTP client), go to Step 4. If you are loading software from a FTP/TFTP server, enter the server's information in the FTP/TFTP Settings section.

FTP/TFTP Settings	
Hostname or IP Address of FTP/TFTP server	100.10.20.1
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).

<u>Image Settings</u>	
Image for Transfer	image 1 ▾
Image Filename (on server)	1.2.0_OS.img <input type="button" value="Get Image"/> <input type="button" value="Put Image"/>
Image Filename (on HTTP Client)	<input type="text"/> <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 Alteon 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 Alteon OS *Command Reference* manual.

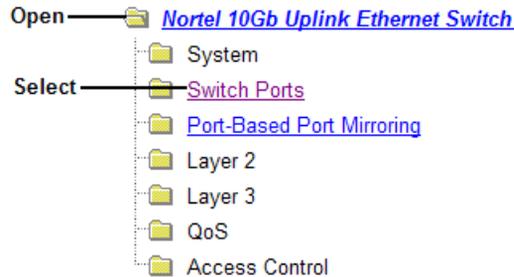
## Steps for Displaying Statistics

Follow these basic steps for viewing switch statistics:

1. Select the Statistics context tab in the Alteon 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:

Switch Port	InOctets	OutOctets	Total Errors
<a href="#">INT1</a>	0	0	0
<a href="#">INT2</a>	0	0	0
<a href="#">INT3</a>	0	0	0
<a href="#">INT4</a>	0	0	0
<a href="#">INT5</a>	0	0	0
<a href="#">INT6</a>	0	0	0
<a href="#">INT7</a>	0	0	0
<a href="#">INT8</a>	0	0	0
<a href="#">INT9</a>	0	0	0
<a href="#">INT10</a>	0	0	0
<a href="#">INT11</a>	0	0	0
<a href="#">INT12</a>	0	0	0

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

## CHAPTER 5

# The Dashboard

---

The Alteon 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 Alteon OS *Command Reference* manual.

## Steps for Displaying Dashboards

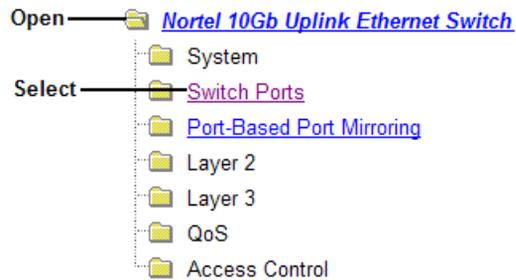
---

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 displays the Alteon OS Blade Network Technologies interface. The top navigation bar includes 'CONFIGURE', 'STATISTICS', and 'DASHBOARD' tabs, along with 'Apply', 'Save', 'Revert', 'Diff', 'Dump', 'Show Log', 'Help', and 'Logout' options. The main content area is titled 'Switch Ports Dashboard' and shows a table of port configurations for 'Nortel 10Gb Uplink Ethernet S'. The left sidebar contains a tree view with folders for 'System', 'Switch Ports', 'Port-Based Port Mirroring', 'Layer 2', 'Layer 3', 'QoS', and 'Access Control'. The table below lists five ports (INT1-INT5) with their respective configurations and operational status.

Status	Switch Port Info	Operational Status	Speed Duplex FlowCtl	Input Frames Output Frames	LinkState Changes Total Errors
	<a href="#">INT1</a> : stp: DISABLED portfast: disabled Flood Blocking: disabled FDB Learning: enabled tagging: enabled PVID: 2	operational	1000/Full/Both	0 0	0 0
	<a href="#">INT2</a> : stp: DISABLED portfast: disabled Flood Blocking: disabled FDB Learning: enabled tagging: enabled PVID: 2	operational	1000/Full/Both	0 0	0 0
	<a href="#">INT3</a> : stp: DISABLED portfast: disabled Flood Blocking: disabled FDB Learning: enabled tagging: enabled PVID: 1	operational	1000/Full/Both	0 0	0 0
	<a href="#">INT4</a> : stp: DISABLED portfast: disabled Flood Blocking: disabled FDB Learning: enabled tagging: enabled PVID: 1	operational	1000/Full/Both	0 0	0 0
	<a href="#">INT5</a> : stp: DISABLED portfast: disabled Flood Blocking: disabled FDB Learning: enabled tagging: enabled PVID: 1	operational	1000/Full/Both	0 0	0 0

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

