



Ethernet Routing Switch 4500 Series

# Release Notes — Software Release 5.0.1

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## Revision History

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<b>Date Revised</b>	<b>Version</b>	<b>Reason for revision</b>
November 2006	1.01	First draft, new document for Nortel Ethernet Routing Switch 4500 Series Release 5.0.
December 2006	1.02	Added CR content current up to December 4, 2006.
December 2006	1.03	Updates from live review and feedback.
December 2006	1.04	Updates from review of draft 03 - CR list pruned, software file names and sizes amended, hardware descriptions amended.
January 2007	1.05	Added browser warning for JDM online help.
January 2007	1.06	Amended CR content, updated software file table
January 2007	1.07	Amended as a result of live review of Jan. 26, 2007.
February 2007	1.08	Amended CR content.
February 2007	1.09	Amended CR content.
February 2007	1.10	Amended CR content.
February 2007	2.01	Standard.
April 2007	2.02	Amended CR content.
April 2007	2.03	Amended to fix CR Q01614097.
April 2007	2.04	Amended to remove fixed CR Q01351001, modified CR Q01614537 description and modify load filenames and sizes
April 2007	2.05	Amended to remove CR Q01362312 and modified CR Q01374109.

## 6 Revision History

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# Introduction

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These are the Release Notes for the Nortel Ethernet Routing Switch 4500 Series, Software Release 5.0.

The Nortel Ethernet Routing Switch 4500 Series is a new line of enterprise mid-range stackable switches that support:

- Power over Ethernet (PoE)
- redundant power options
- edge networks connectivity
- resilient stack operation for up to 8 switches in a stack

The 1U switch models in the Nortel Ethernet Routing Switch 4500 Series support a wide range of connectivity speeds and PoE.

The Nortel Ethernet Routing Switch 4500 Series, supported by software release 5.0, includes the following switch models:

- Nortel Ethernet Routing Switch 4526FX
- Nortel Ethernet Routing Switch 4550T
- Nortel Ethernet Routing Switch 4550T-PWR
- Nortel Ethernet Routing Switch 4548GT
- Nortel Ethernet Routing Switch 4548GT-PWR

Configurations can vary from a stand-alone switch to a stack of up to 8 switches. A stack can consist of any combination of switches. One of the benefits of operating Nortel Ethernet Routing Switch 4500 Series switches in a stack is management efficiency; a stack is managed with a single IP address and software is available as a single image across all models.

These Release Notes provide the latest information about Software Release 5.0, as well as operational issues not included in the documentation suite.

For a complete list of documentation in the 4500 Series suite, consult ["Related information"](#) (page 16).

The information in these Release Notes supersedes applicable information in other documentation.

## Browsers for Online Help

Nortel supports the following browsers for Java Device Manager Online Help:

- Netscape
- Internet Explorer

### Netscape specifics

If you use Netscape as your Web browser, to ensure that the topics and table of contents display correctly when making a context call to on-line Help, perform the following procedure once, before requesting Help on a topic.

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Step	Action
1	Start the Netscape browser.
2	From the <b>Tools</b> menu, select <b>Options</b> . <i>An <b>Options</b> window opens.</i>
3	In the <b>Security and Privacy</b> panel of the <b>Options</b> window, click <b>Site Controls</b> . <i>An <b>Options - Site Controls</b> window opens.</i>
4	Ensure that the <b>Site List</b> tab is selected.
5	Select <b>Local Files</b> in the <b>Master Settings</b> area of the window.
6	Select <b>Internet Explorer</b> in the <b>Rendering Engine</b> area of the window.
7	Click <b>OK</b> to close the <b>Options - Site Controls</b> window.

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—End—

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## Topics in this document

The following topics are discussed in this document:

- ["File names for this release" \(page 11\)](#)
- ["Hardware features in Release 5.0" \(page 12\)](#)
- [General software features](#)
- ["Supported software and hardware capabilities" \(page 14\)](#)

- ["Known limitations and considerations in Release 5.0"](#) (page 15)
- ["Related information"](#) (page 16)
- ["How to get help"](#) (page 17)

## File names for this release

" [Software Release 5.0 Components](#)" (page 11) describes the Nortel Ethernet Routing Switch 4500 Series, Software Release 5.0 software files. File sizes are approximate.

**Note:** Trial participants: file sizes in the following table refer to the zipped file sizes.

### Software Release 5.0 Components

Module or file type	Description	File Name	File Size (bytes)
Standard runtime image software version 5.0.1.000	Standard image for the Nortel Ethernet Routing Switch 4500 Series	4500_501000.img	4842624
Secure runtime image software version 5.0.1.001	Secure image for the Nortel Ethernet Routing Switch 4500 Series	4500_501001s.img	4942396
Boot/diagnostic software version 5.0.1.0	Switch diagnostic software	4500_5010_diag.bin	1574954
Java Device Manager software version for Windows (6.0.5.0)	Device Manager software image for Windows NT, Windows XP, Windows 2003, Windows 2000	jdm_6050.exe	154129132
Java Device Manager software version for UNIX (6.0.5.0)	Device Manager software image for Solaris	jdm_6050_solaris_sparc.sh	179041362
	Device Manager software image for HP UX	jdm_6050_hpux_pa-risc.sh	194376786
Java Device Manager software version for Linux	Device Manager software image for Linux	jdm_6050_linux.sh	179631186
Software Release 5.0 Management Information Base (MIB) definition files	MIB definition files	Ethernet_Routing_Switch_45xx_MIBs_5.0.0.zip	865272

## Hardware features in Release 5.0

This section summarizes the hardware features for Nortel Ethernet Routing Switch 4500 Series switches.

### General hardware features

All switches in the series provide the following general hardware features:

- 1 front-mounted USB host port
- 1 front-mounted DB9 console port
- 2 rear-mounted Hi-stack stacking connectors
- SFP support, including 100FX on the 4526FX, 4550T and 4550T-PWR models
- IEEE 802.3 10BASE-T support
- IEEE 802.3u 100BASE-T support
- IEEE 802.3ab 1000BASE-T support
- Auto-negotiation
- MDI/MDI-X auto-sensing

### Hardware description by model

Model	Model-specific features
4526FX	24 100BaseFX ports (MTRJ connector) plus 2 10/100/1000 SFP combo ports  Redundant power slot for DC/DC converter installation
4550T	48 10/100BaseTX RJ-45 ports plus 2 10/100/1000 SFP combo ports  Redundant power slot for DC/DC converter installation
4550T-PWR	48 10/100BaseTX RJ-45 ports with PoE plus 2 10/100/1000 SFP combo ports  Integrated redundant power connector for RPS 15 cable connection
4548GT	48 10/100/1000BaseTX RJ-45 ports and 4 shared SFP ports  Redundant power slot for DC/DC converter installation
4548GT-PWR	48 10/100/1000BaseTX RJ-45 ports with PoE and 4 shared SFP ports  Integrated redundant power connector for RPS 15 cable connection

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## Software features in Release 5.0

This section lists some of the software features supported on the Nortel Ethernet Routing Switch 4500 Series switches. For specific information, consult the appropriate document from "[Publications](#)" (page 16).

### General software features

The following list summarizes the main software features supported in this release.

- ASCII configuration file generator
- Automatic Unit Replacement (AUR)
- Autotopology (802.1ab, SONMP)
- Boot/DHCP address assignment (RFC 1542)
- Broadcast rate limiting
- Custom Auto-Negotiation Advertisement (CANA)
- Distributed MultiLink Trunking (DMLT)
- EAPoL (802.1x) SHSA/MHMA and Guest VLAN
- Flow Control on gigabit Ethernet ports (802.3x)
- Independent VLAN Learning (IVL) support
- Internet Group Management Protocol version 2 (IGMPv2, RFC 2236) proxy and snooping support
- Java Device Manager (JDM) support
- Link Aggregation (802.3ad)
- Link Layer Discovery Protocol (802.1AB)
- MultiLink Trunking (MLT)
- Multiple Spanning Tree groups (802.1s)
- Nortel CLI (NNCLI)
- Ping command
- Port mirroring (including ingress and egress)
- Port-based VLAN support
- Power over Ethernet (PoE, 802.3af)
- Protocol-based VLAN support (including IPv6 protocol VLANs)
- QoS - Diffserv Code Points (DSCP RFC2998) marking and classification
- Quality of Service (QoS) - 802.1q
- Quality of Service (QoS) - Layer 2 to Layer 4 filtering and policies

- Quality of Service (QoS) - Offset filtering (first 80 bytes)
- Quick start command and Web interface
- Rapid Spanning Tree Protocol (802.1w)
- Reload command
- Remote Authentication Dial-In User Server (RADIUS)
- Remote Monitoring (RMON)
- Resilient stacking
- Secure Shell (SSH, SSHv2)
- Shutdown command
- Simple Network Management Protocol (SNMP, SNMPv3)
- Simple Network Time Protocol (SNTP)
- Spanning Tree Protocol Group (802.1D, 802.1t)
- Telnet server and client
- Trivial File Transfer Protocol (TFTP)
- Web User Interface (http and https)

## Supported software and hardware capabilities

The following table summarizes the known limits for the Nortel Ethernet Routing Switch 4500 Series, Software Release 5.0 and Device Manager 6.0.5.0.

### Supported capabilities for the Nortel Ethernet Routing Switch 4500 Series

Feature	Maximum number supported
egress queues	4
VLANs	256
Spanning Tree Group instances (802.1s)	8
MAC addresses	8000
Stacking bandwidth (full stack of 8 units)	320 Gb/s: 40 Gb/s per switch
Stack, units per	8
MultiLink Trunking (MLT), Link Aggregation (LAG) groups	6
Links per MLT/LAG	4
802.1x (EAP) clients per port, running in MHMA	32
802.1x (EAP) clients per stack	384

## Known limitations and considerations in Release 5.0

The following tables describe issues known to exist in the Nortel Ethernet Routing Switch 4500 Series Software Release 5.0. "Ethernet Routing Switch 4500 Series known limitations" (page 15) describes limitations known to exist in Software Release 5.0.

### Ethernet Routing Switch 4500 Series known limitations

Change Request Number	Description
Q01351184	<b>Port speed mismatch:</b> If you link two ports explicitly set for different speeds (for example one configured as 10BaseT and the other as 100BaseTX) the port link LED may indicate a link, but the switch does not establish a link. <b>SOLUTION:</b> Connect ports using the same set speed or use auto-negotiation on each switch.
Q01374109	<b>PoE:</b> If you connect one type of Power over Ethernet switch to another, for example a 4548GT-PWR and a 4550T-PWR, one switch may deliver power to the other. This is due to the PoE Legacy Type Detection. <b>SOLUTION:</b> Legacy detection can be disabled on the switch if you are not using any PoE devices which require legacy detection. An alternate solution is to administratively disable Power over Ethernet on ports interconnecting any two Power over Ethernet switches.
Q01479196 Q01480192 Q01481181 Q01481218	<b>Web Interface:</b> The Web interface supports only alpha-numeric characters. Use only alpha-numeric characters in the creation of elements. For example, if you create a VLAN in the CLI or the Device Manager using characters that are not alpha-numeric, you cannot delete the VLAN within the Web Interface.
Q01496548	During reboot or power up operations, but before the agent code loads, the switch may provide an intermittent link to remote devices connected to front panel ports. Regardless, no traffic switching occurs until the agent code load completes.
Q01514147	<b>CLI:</b> On the console, the SNMP server name is intentionally truncated to provide enhanced user experience. On the Web interface, the full SNMP server name appears.
Q01524259	<b>Web Interface:</b> STP participation cannot be modified for LACP-enabled ports. This condition does not impair switch operation.
Q01536648	<b>CLI:</b> If the HTTP port default value of 80 is changed, you must use the NNCLI command <code>default http-port</code> to restore the HTTP port value to the default value.
Q01540397	<b>STP:</b> If Spanning Tree operation is not used on an LACP port, you must disable STP after you configure LACP.
Q01557789	<b>SSH:</b> You cannot download the SSH authorization key from a USB device from non-base units in a stack. <b>SOLUTION:</b> Use the base unit in the stack for all USB operations in the stack.

Change Request Number	Description
Q01542038	<b>CLI, MAC SECURITY, STAND-ALONE UNIT:</b> MAC addresses added to the MAC Security table using the CLI do not appear in the MAC Security table. <b>SOLUTION:</b> Use the Web-based Manager or the Java Device Manager to add MAC addresses to the MAC Security table. <b>NOTE:</b> This condition does not occur in stacked switches.
Q01565427	A change in the operation of Nortel's SONMP-based auto topology means that directly connected BayStack 450 switches report a physical auto topology change every 70 seconds to the local ERS 4500 switch. You can ignore this auto topology change message where there is a direct connection from the ERS 4500 to a BayStack 450 switch.
Q01606162	When setting QoS on a port to trusted role, the switch allocates 21 classifiers per trusted port. It is not possible to apply trusted role to all switch ports, due to the resources available. To apply application prioritization across all switch ports on the Ethernet Routing Switch 4500, set the port type to unrestricted. This prioritizes traffic based on the 802.1p priority and allows filters to be configured based on specific application needs. For example, assign all packets marked with DSCP EF priority, such as with VoIP, to the highest priority queue.
Q01614537	LLDP local-mgmt-addr TLV becomes disabled on ports from temporary base unit in a stack. When you have a stack of ERS4500 switch units, and you are using LLDP (Link Layer Discovery Protocol), and have the local-mgmt-addr TLV (type-length-value element) enabled on ports, and when the base unit of the stack is reset or fails, the logically adjacent stack unit becomes the temporary base unit, and at this time the local-mgmt-addr TLV becomes disabled on ports residing on the temporary base unit. The workaround is to re-enable the local-mgmt-addr TLV on those ports. An alternate workaround is to reset the stack such that the stack returns to normal operation with a designated base unit.

## Related information

This section lists the information sources that relate to the Nortel Ethernet Routing Switch 4500 Series, Software Release 5.0.

### Publications

Refer to the following publications for information about the Nortel Ethernet Routing Switch 4500 Series, Software Release 5.0:

- *Nortel Ethernet Routing Switch 4500 Series Regulatory Information* (NN47205-100)
- *Nortel Ethernet Routing Switch 4500 Series Installation* (NN47205-300)
- *Nortel Ethernet Routing Switch 4500 Series Overview — System Configuration* (NN47205-500)



- *Nortel Ethernet Routing Switch 4500 Series Configuration — VLANs, Spanning Tree, and MultiLink Trunking (NN47205-501)*
- *Nortel Ethernet Routing Switch 4500 Series Configuration — System Monitoring (NN47205-502)*
- *Nortel Ethernet Routing Switch 4500 Series Configuration — Quality of Service (NN47205-504)*
- *Nortel Ethernet Routing Switch 4500 Series Security — Configuration (NN47205-505)*
- *Installing SFP and XFP Transceivers and GBICs (318034-C)*

## How to get help

This section explains how to get help for Nortel products and services.

### Getting help from the Nortel web site

The best way to get technical support for Nortel products is from the Nortel Technical Support web site:

[www.nortel.com/support](http://www.nortel.com/support)

This site provides quick access to software, documentation, bulletins, and tools to address issues with Nortel products. From this site, you can:

- download software, documentation, and product bulletins
- search the Technical Support Web site and the Nortel Knowledge Base for answers to technical issues
- sign up for automatic notification of new software and documentation for Nortel equipment
- open and manage technical support cases

### Getting help over the phone from a Nortel Solutions Center

If you do not find the information you require on the Nortel Technical Support web site, and you have a Nortel support contract, you can also get help over the phone from a Nortel Solutions Center.

In North America, call 1-800-4NORTEL (1-800-466-7835).

Outside North America, go to the following web site to obtain the phone number for your region:

[www.nortel.com/callus](http://www.nortel.com/callus)

### Getting help from a specialist using an Express Routing Code

To access some Nortel Technical Solutions Centers, you can use an Express Routing Code (ERC) to quickly route your call to a specialist in your Nortel product or service. To locate the ERC for your product or service, go to:

[www.nortel.com/erc](http://www.nortel.com/erc)

**Getting help through a Nortel distributor or reseller**

If you purchased a service contract for your Nortel product from a distributor or authorized reseller, contact the technical support staff for that distributor or reseller.



Ethernet Routing Switch 4500 Series

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