

Nortel Networks

# BoSS v3.0

## BayStack operating system Switching Software

### BoSS benefits for resilient stacking switches

- Provides flexibility of stacking different BayStack Switches— a stack is managed as a single entity with a single IP address
- Offers investment protection for existing BayStack 450 and BayStack Business Policy Switch customers
- Simplifies software upgrades
- Enhances security

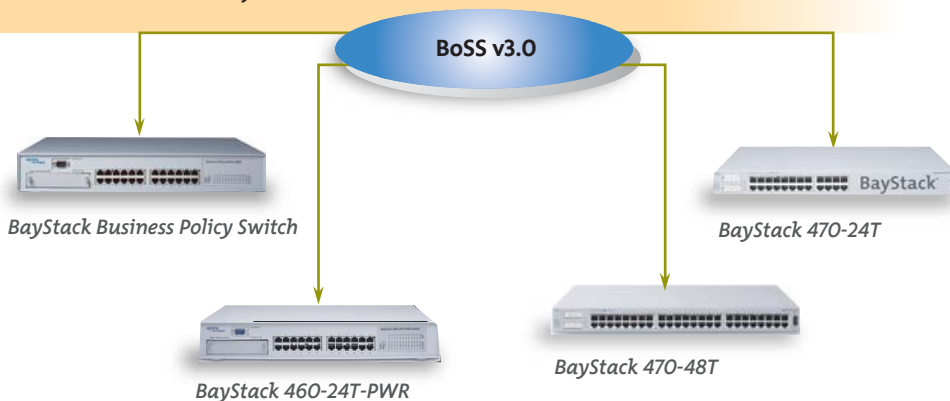
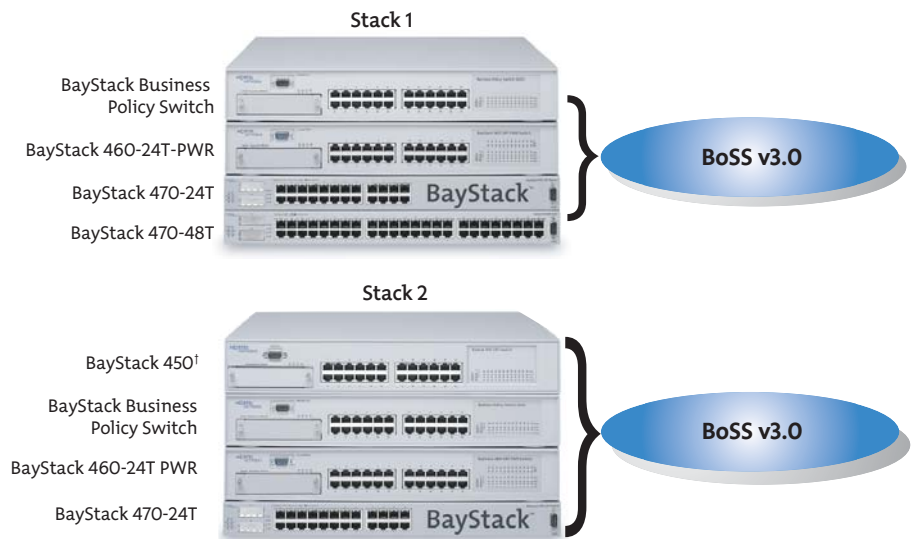


Figure 1: Single software image for different switch types

### Overview

BayStack\* operating system Switching Software (BoSS) is a common OS platform that can support multiple BayStack Switches. Specifically, BoSS v3.0 for resilient stacking switches is a single software image that supports four BayStack Switches: the BayStack 460-24T-PWR, the BayStack Business Policy Switch, the BayStack 470-48T, and the BayStack 470-24T (Figure 1). With the release of BoSS, Nortel Networks becomes the first vendor to offer a single software image that truly supports multiple switch types. Other vendors may have a general switching software platform; however, each switch has its own software image.



**Figure 2: Stacking flexibility with BoSS v3.0**

Note: †BayStack 450 must have BayStack 450 software v4.2 or higher.

BoSS provides the flexibility of stacking different switches in the same stack, simplifying software upgrades and enhancing security. BoSS is ideal for medium and large enterprises that may have different types of BayStack switches in their wiring closets.

### Flexibility of stacking with other BayStack Switches

Using BoSS v3.0 software, up to eight different BayStack Switches are able to stack with each other.

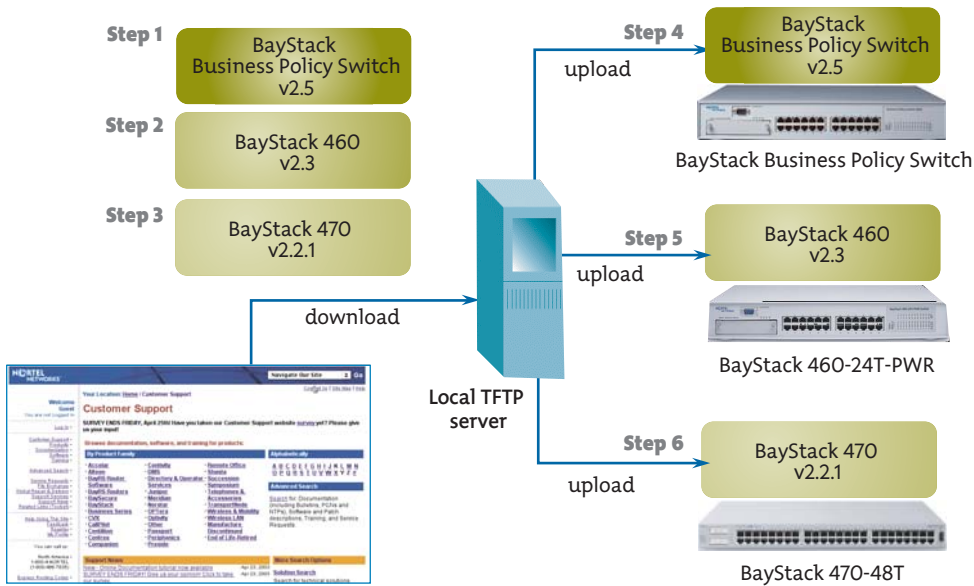
Two types of stacks are supported:

- BayStack 470-48T can stack with any combination of BayStack 470-24T, BayStack Business Policy Switch, and BayStack 460-24T-PWR
- BayStack 470-24T can stack with BayStack 470-48T, BayStack Business Policy Switch, BayStack 460-24T-PWR, and BayStack 450

It should be noted that the BayStack 470-48T cannot be stacked with BayStack 450† (*Figure 2*).

### Investment protection

With its stacking flexibility, BoSS is able to protect customers' existing investment in BayStack 450 and BayStack Business Policy Switch. Utilizing BoSS, newer feature-rich switches, such as BayStack 470-24T, can be added to existing BayStack 450 and BayStack Business Policy Switch stacks, providing built-in stacking and additional uplink capability to the stack.



Nortel Networks support site:  
<http://www.nortelnetworks.com/support>

Figure 3: Currently, software updates with different software images require multiple steps.

### Simplified network operations

BoSS simplifies network operations by reducing the number of steps required for switch software updates. Up until now, each BayStack switch utilized different software. This meant that any software updates required you to download the appropriate software version for each switch from the Nortel Networks support Web site, and then upload these images to the switches one-by-one (Figure 3).

With BoSS, the update process is considerably simplified. A single software image is downloaded from the Nortel Networks Web site and loaded to the base unit of the stack. (Figure 4).

Finally, it is much easier to track software, as a single version number is managed for these stacks, rather than a separate version number for each switch type.

### Enhanced security

BoSS offers the highest level of security with features including Secure Shell (SSH), IEEE 802.1x based security [also known as Extensible Authentication Protocol (EAP)], Simple Network

Management Protocol (SNMPv3), IP Manager's list, MAC-address based security, and Remote Authentication Dial-In User Service (RADIUS) authentication.

SSHv2 supports strong authentication and encrypted communications. It allows you to log into the switch from an SSH client and perform a secure Telnet session using CLI commands. This feature is ideal for security-conscious customers, such as federal governments.

For added security, BoSS supports the 802.1x-based security feature (EAP).

Based on the IEEE 802.1x standard, EAP limits access to the network based on user credentials. A user is required to "login" to the network using a username/password; the user database is maintained on the authentication server (not the switch). EAP prevents network connectivity without password authorization for added security and control in physically non-secure areas. It is used where the network is not 100 percent physically secure or where physical security needs enhancement, for example, banks, trading rooms, or classroom training facilities. EAP supports client access to the network and interoperates with Microsoft Windows XP and other standards-based clients.

SNMPv3 provides user authentication and data encryption for higher security. It also offers secure configuration and monitoring.

IP Manager List limits access to the management features of the BayStack switches using a defined list of IP addresses, providing greater network security and manageability.

BoSS features BaySecure\* MAC-address based security, which allows authentication of all access, not only to the switches for management and configurations but also access to the infrastructure through these switches.

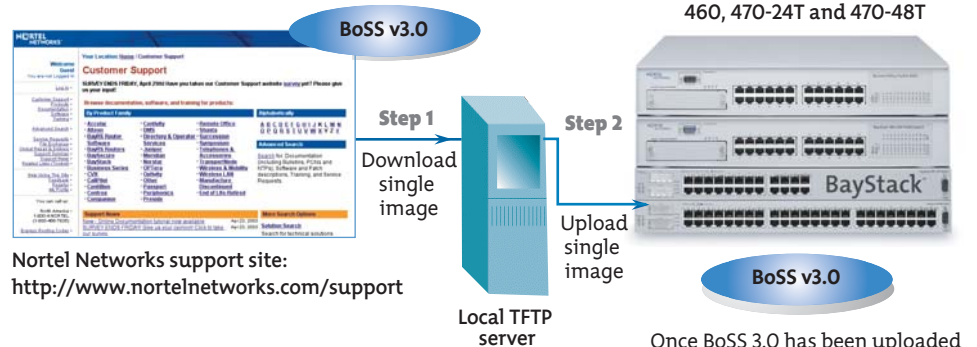


Figure 4: Simplified process with only one software to update for different switch types

Stack with Business Policy Switch, 460, 470-24T and 470-48T

Once BoSS 3.0 has been uploaded on each switch, the future BoSS image will need to be loaded only to the base unit. The base unit will automatically update the other units in the stack.

This software feature limits access to only network authorized and trusted personnel, including full tracking of network connections. With BaySecure, network access is granted or denied via proper MAC-address (up to a maximum of 448) identification.

In addition, with the Distributed Access List Security feature, network access is granted or denied on a per-port basis. BoSS also provides RADIUS authentication for switch security management.

### Implementing BoSS: stacking hierarchy

BoSS requires that stacks should be ordered in a certain way, depending upon the switches included in the stack. The key is determining which switch will be the base unit—*Figure 5* explains how that decision is made.

### How to download BoSS

BoSS v3.0 can be downloaded by authorized users from <http://www.nortelnetworks.com/cs> at no charge. Select “BayStack”, then click on “Software” under one of the appropriate switches.

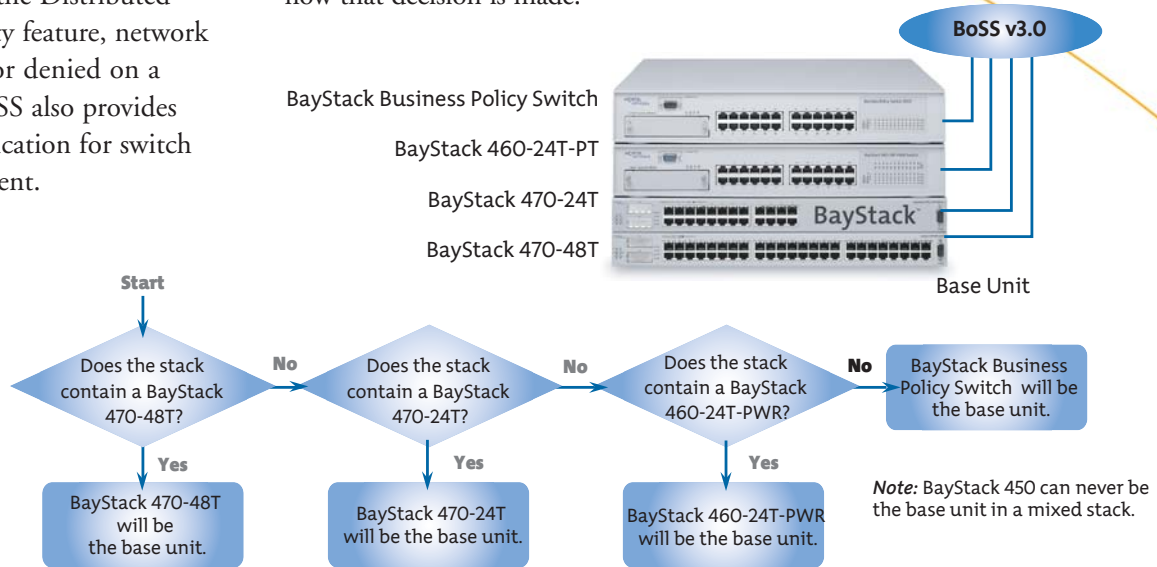


Figure 5: Stacking hierarchy



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