Release Notes for the BayStack 420 10/100/1000 Switch

Software Version 1.0.0

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Contents

Introduction

These release notes contain important information about Nortel Networks BayStack 420 10/100/1000 Switch software and operational issues that is not available in the following related documents:

*   *Using the BayStack 420 10/100/1000 Switch* (part number 209418-A)

    Describes how to use the BayStack 420 10/100/1000 Switch for network configuration.

*   *Using Web-Based Management for the BayStack 420 10/100/1000 Switch* (part number 211252-A)

    Describes how to use the Web-based management tool to configure switch features.

*   *Installing the BayStack 420 10/100/1000 Switch* (part number 209420-A)

    Describes how to install the BayStack 420 Switch.

*   *Getting Started with BayStack 420 Management Software* (part number 211250-A)

    Describes how to install the Java-based device level software management application.

*   *Reference for the BayStack 420 Management Software* (part number 211251-A)

    Describes how to use the Java-based device level software management application.

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These release notes contain the following sections:

- Important Stacking Information (page 6)
- Port Statistics Issues (page 7)
- Multilink Trunking Issues (page 7)
- Web-based Management Issues (page 7)
- Device Manager Issues (page 8)
- File Names and Network Management Software Support (page 8)
- Bridge Parameters (page 9)

Important stacking information

The BayStack 420-24T hardware can be stacked to form a unidirectional ring with a data rate of 1 gigabit per second. A stacking cable connects the Up connector of one unit in a stack to the Down connector of the next unit in the stack. A stack cable is also used to join the top and bottom units in a stack to complete the ring. For larger stacks, this requires a 100 cm cable.

After you have completed the cabling of a stack, and have pressed the Unit Select switch for the base unit in the stack, you can turn on the power for the switch. If the stack ring is broken by the removal of a cable or the loss of power to any unit in the stack, then all of the units in the stack become standalone units.

If you make any changes to the size of a stack by adding or removing units, you will need to turn the power to the stack back on after you have connected all the cables and completed the new stack ring. Once the power is turned on, it takes about three minutes to build the new stack. However, Nortel recommends that you make changes to a stack at times of low network use in order to minimize the effect on other network users.

You can find more information about the BayStack 420-24T hardware in the *Using the BayStack 420 10/100/1000 Switch* manual. This document can be found on the CD in the documentation kit that comes with the switch.

Port statistics issues

The BayStack 420 10/100/1000 Switch has the following port statistics issue:

• Port Statistics do not display the number of packets received and transmitted as separate counts. The statistics display the number of packets received and transmitted as one aggregate number.

Multilink trunking issues

Multilink trunking for the BayStack 420 10/100/100 switch has the following issue:

• If you add a new trunk link when a link already exists between the BayStack 420 switch and a Passport 8600 switch, the traffic flowing between the two switches may be interrupted for up to 10 minutes. This occurs when the Passport 8600 switch does not flush the MAC table because of a a topology change, and because the Spanning Tree Protocol (STP) is blocking the ports associated with the existing link.

Web-based management issues

The BayStack 420 10/100/1000 Switch has the following Web-based management issues:

• In Web-based management, Switch view shows Cas in/out instead of Cas Up/ Down.
• When you use Web-based management to access the Switch view, you may receive security warnings. This is normal.
• Netscape* Communicator 4.6 does not show the switch view screen in Web-based management. You should use Netscape Communicator 4.77 to access the switch view.
• In Web-based management, you cannot change a non-base unit's console port speed. You can only change the speed of the base-unit console port using the Web interface.

- In Web-based management, you cannot disable a port that is a trunk member. You should use the console or Telnet interface to disable the port.
- Resizing the Netscape browser window reloads the main Web-based management page.

Device Manager issues

The BayStack 420 Device Manager has the following issues:

- The Device Manager requires a monitor that displays 256 or more colors to operate.
- The Device Manager does not support the Macintosh* computer.
- If you are running Microsoft* Windows* 2000 and use Device Manager to start a Telnet session, Windows 2000 opens two Telnet windows.
- Currently, there is no autoPVID feature in Device Manager because there is no MIB support.
- Version 1.3.0 of the Java* Runtime Environment (JRE) does not support dual processors under Windows 2000. However, version 1.3.0_02 of the Java Runtime Environment supports them. Go to http://java.sun.com/j2se/1.3/download-windows.html for a download of this version of the JRE software.

File names and network management software support

The following table provides agent and network management software information.

Table 1 Agent and network management support items

Item	Description
Agent File Name	bs420100_38.img
Device Manager Support	5.2
Optivity NMS Support	ONMS 9.1.0.2 and above (OIT file is required)
OIT File Name	NMS-BS420-v10-A.oit

Reference for the BayStack 420 Management Software issues

The following sections are additions to the *Reference for the BayStack 420 Management Software* (part number 211251-A).

Bridge parameters

Bridge parameters allow you to configure the global Spanning Tree and to view the MAC address table for a BayStack 420 10/100/1000 Switch. Bridge information also includes Spanning Tree Group (STG) information.

Bridge information is available in Device Manager on the following tabs:

- Base tab (next)
- Spanning tree tab (page 10)
- Transparent tab (page 13)
- Forwarding tab (page 14)
- Configuration tab (page 17)
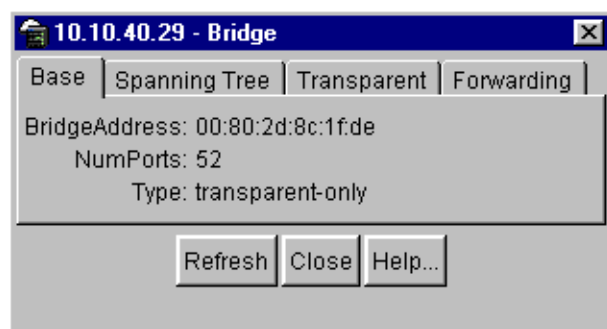- Status tab (page 18)
- Port tab (page 20)

Base tab

The MAC address used by the bridge must be referred to in a unique fashion; moreover, it should be the smallest MAC address (numerically) of all ports that belong to the bridge. However it is only required to be unique when integrated with dot1dStpPriority. A unique BridgeIdentifier is formed that is used in the Spanning Tree Protocol.

To view the Base tab:

➜ From the menu bar, select Edit > Bridge.

The Bridge dialog box opens with the Base tab displayed (Figure 1).

Figure 1   Base tab

Table 2 describes the Base tab fields.

Table 2   Base tab fields

Field	Description
BridgeAddress	MAC address of the bridge when it is referred to in a unique fashion. This address should be the smallest MAC address of all ports that belong to the bridge. However, it is has to be unique. When concatenated with dot1dStpPriority, a unique bridge ID is formed that is then used in the Spanning Tree Protocol.
NumPorts	Number of ports controlled by the bridging entity.
Type	Indicates the type of bridging this bridge can perform. If the bridge is actually performing a certain type of bridging, this will be indicated by entries in the port table for the given type.

Spanning Tree tab

The Spanning Tree tab displays the version of the spanning tree protocol currently running. If future versions of the IEEE spanning tree protocol are released that are incompatible with the current version, a new value will be defined.

To view the Spanning Tree tab:

1   From the Device Manager menu bar, choose Edit > Bridge.

The Bridge dialog box opens, with the Base tab displayed (Figure 1).

2   Click the Spanning Tree tab.

The Spanning Tree tab opens (Figure 2).

Figure 2   Spanning Tree tab

Table 3 describes the Spanning Tree tab fields.

Table 3   Spanning Tree tab fields

Field	Description
ProtocolSpecification	Version of the Spanning Tree Protocol being run. Values include: • decLb100: Indicates the DEC LANbridge 100 Spanning Tree Protocol. • ieee8021d: IEEE 802.1d implementations will return this entry. When future versions of the IEEE Spanning Tree Protocol are released that are incompatible with the current version, a new value will be defined.
Priority	Value of the writable portion of the bridge ID. That is, the first two octets of the (8-octet long) bridge ID. The last six octets of the bridge ID are given by the value of BridgeAddress.
TimeSinceTopologyChange	Time (in hundredths of a second) since the last time a topology change was detected by the bridge entity.
TopChanges	Number of topology changes detected by this bridge since the management entity was reset or initialized.
DesignatedRoot	Bridge ID of the root of the spanning tree as determined by the Spanning Tree Protocol. This is executed by the node. This value is used as the Root ID parameter in all configuration bridge PDUs originated by the node.

Table 3 Spanning Tree tab fields (continued)

Field	Description
RootCost	Cost of the path to the root as seen from this bridge.
RootPort	Port number of the port that offers the lowest cost path from this bridge to the root bridge.
MaxAge	Maximum age of Spanning Tree Protocol information learned from the network on any port before it is discarded, in units of hundredths of a second. This is the actual value that this bridge is currently using.
HelloTime	Time between the transmission of Configuration bridge PDUs by the node on any port when it is the root of the spanning tree (in units of hundredths of a second). This is the actual value that the bridge is currently using.
ForwardDelay	Value (in hundredths of a second) that controls how fast a port changes its spanning state when moving towards the Forwarding state. The value determines how long the port stays in each of the Listening and Learning states, that precede the Forwarding state. The value is also used when a topology change has been detected and is underway. This ages all dynamic entries in the Forwarding database. **Note**: This value is the one that this bridge is currently using, in contrast to dot1dStpBridge ForwardDelay which is the value that this bridge and all others would start using if/when this bridge were to become the root.]
BridgeMaxAge	Value that all bridges use for the maximum age of a bridge when it is acting as the root. **Note**: 802.1D-1990 specifies that the range is related to the value of BridgeHelloTime. The granularity of this timer is specified by 802.1D-1990 to be 1 second. A badValue error may be returned if the value set is not a whole number.

Table 3   Spanning Tree tab fields (continued)

Field	Description
BridgeHelloTime	Value that the bridge uses for HelloTime when the bridge is acting as the root. The granularity of this timer is specified by 802.1D- 1990 to be one second. An agent may return a badValue error if a set is attempted to a value that is not a whole number of seconds.
TimeSinceTopologogyChange	Value that all bridges use for ForwardDelay when this bridge is acting as the root.
	Note: 802.1D-1990 specifies that the range for this parameter is related to the value of dot1dStpBridgeMaxAge. The granularity of this timer is specified by 802.1D-1990 to be one second. An agent may return a badValue error if a set is attempted to a value that is not a whole number of seconds.

Transparent tab

The Transparent tab contains information about a specific unicast MAC address that has forwarding information for the bridge.

To view the Transparent tab:

1   From the Device Manager menu bar, choose Edit > Bridge.

The Bridge dialog box opens, with the Base tab displayed (Figure 1 on page 10).

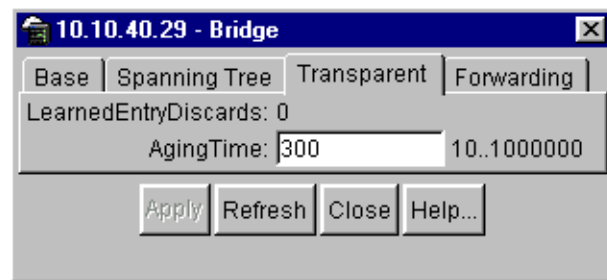**2**   Click the Transparent tab.

The Transparent tab opens (Figure 3).

Figure 3   Transparent tab

Table 4 describes the Transparent tab items.

Table 4   Transparent tab items

Item	Description
LearnedEntryDiscard	Number of Forwarding database entries learned that have been discarded due to a lack of space in the Forwarding database. If this counter is increasing, it indicates that the Forwarding database is becoming full regularly. This condition will effect the performance of the subnetwork. If the counter has a significant value and is not presently increasing, it indicates that the problem has been occurring but is not persistent.
AgingTime	Time-out period in seconds for aging out dynamically learned forwarding information. **Note**: The 802.1D-1990 specification recommends a default of 300 seconds.

Forwarding tab

The Forwarding tab displays the current state of the port, as defined by application of the Spanning Tree Protocol. This state controls what action a port takes when a frame is received. If the bridge detects a port that is malfunctioning, it places the port into the "broken" state. For ports that are disabled, the value is "disabled."
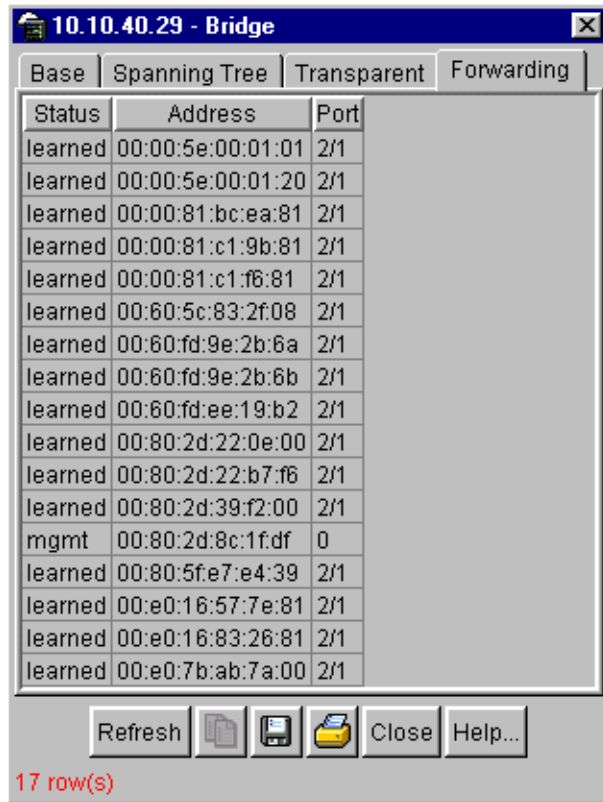
To view the Forwarding tab:

1   From the Device Manager menu bar, choose Edit > Bridge.

The Bridge dialog box opens, with the Base tab displayed (Figure 1 on page 10).

2 Click the Forwarding tab.

The Forwarding tab opens (Figure 4).

Figure 4 Forwarding tab

Table 5 describes the Forwarding tab fields.

Table 5 Forwarding tab fields

Field	Description
Status	The values of this fields include: • invalid: Entry is no longer valid, but has not been removed from the table. • learned: Value of the corresponding instance of dot1dTpFdbPort was learned and is being used. • self: Value of the corresponding instance of dot1dTpFdbAddress represents an address of the bridge. The corresponding instance of dot1dTpFdbPort indicates that a specific port on the bridge has this address. • mgmt(5): Value of the corresponding instance of dot1dTpFdbAddress is also the value of an existing instance of dot1dStaticAddress. • other: none of the preceding. This would include where some other MIB object (not the corresponding instance of dot1dTpFdbPort or an entry in the dot1dStaticTable) is being used to determine if a frames addressed to the value of dot1dTpFdbAddress are being forwarded.
Address	A unicast MAC address for which the bridge has forwarding or filtering information.
Port	Either the value "0" or the port number on a frame has been seen. The source address must be equal to the value of the corresponding instance of dot1dTpFdbAddress A value of "0" indicates that the port number has not been learned, so the bridge does have the forwarding/filtering information for this address (located in the dot1dStaticTable). You should assign the port value to this object whenever it is learned even for addresses for which the corresponding value of dot1dTpFdbStatus is not learned(3).

Spanning tree group (STG)

The spanning tree group (STG) information is stored in the STG dialog box. Each row in each tab specifies a different STG in the device.

Configuration tab

The Configuration tab in the STG dialog box has general information for the STG.

To view the Configuration tab:

→ From the Device Manager menu bar, choose VLANs > STG.

The STG dialog box opens, with the Configuration tab displayed (Figure 5).
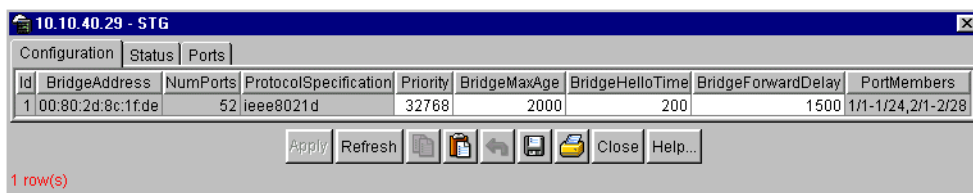
Figure 5   Configuration tab

Table 6 describes the Configuration tab fields.

Table 6   Configuration tab fields

Item	Description
ID	An identifier used to identify a STG in the device.
BridgeAddress	MAC address used by a bridge when it is referred to in a unique fashion. Nortel Network recommends that the number be the smallest MAC address of all ports belonging to the bridge. However, it is only required to be unique. When concatenated with Priority, a unique bridge identifier is formed that is used in the Spanning Tree Protocol.
NumPorts	Number of ports controlled by this bridging entity.
ProtocolSpecification	Version of the spanning tree protocol being run. Values include: • decLb100: Indicates the DEC LANbridge 100 Spanning Tree Protocol. • ieee8021d: IEEE 802.1d implementations will return this entry. When future versions of the IEEE Spanning Tree Protocol are released that are incompatible with the current version, a new value will be defined.
Priority	Value of the writable portion of the bridge ID. That is, the first two octets of the (8-octet long) bridge ID. The last six octets of the bridge ID are given by the value of BridgeAddress.

Table 6 Configuration tab fields (continued)

Item	Description
BridgeMaxAge	Value that all bridges use for the maximum age of a bridge when it is acting as the root. **Note**: 802.1D-1990 specifies that the range is related to the value of BridgeHelloTime. The granularity of this timer is specified by 802.1D-1990 to be 1 second. A badValue error may be returned if the value set is not a whole number.
BridgeHelloTime	Value that all bridges use for HelloTime when a bridge is acting as the root. **Note**: The granularity of this timer is specified by 802.1D-1990 to be 1 second. A badValue error may be returned if the value set is not a whole number.
BridgeForwardDelay	Value that all bridges use for ForwardDelay when this bridge is acting as the root. **Note**: 802.1D-1990 specifies that the range is related to the value of BridgeHelloTime. The granularity of this timer is specified by 802.1D-1990 to be 1 second. A badValue error may be returned if the value set is not a whole number.
PortMembers	Bit-field used to identify the ports in the system that are members this STG. The bit-field is 32 octets long representing ports 0 to 255 (inclusive).

Status tab

The Status tab in the STG dialog box has status information for the STG.

To view the Status tab:

1 From the Device Manager menu bar, choose VLANs > STG.

The STG dialog box opens, with the Configuration tab displayed (Figure 5 on page 17).

2 Click the Status tab.

The Status tab opens (Figure 6).

Figure 6   Status tab

Table 7 describes the Status tab fields.

Table 7   Status tab fields

Field	Description
ID	An identifier used to identify a STG in the device.
BridgeAddress	MAC address used by a bridge when it is referred to in a unique fashion. Nortel Networks recommends that the number be the smallest MAC address of all ports belonging to the bridge. However, it is only required to be unique. When concatenated with Priority, a unique bridge identifier is formed that is used in the Spanning Tree Protocol.
NumPorts	Number of ports controlled by this bridging entity.
ProtocolSpecification	Version of the Spanning Tree Protocol being run. Values include: • decLb100: Indicates the DEC LANbridge 100 spanning tree protocol. • ieee8021d: IEEE 802.1d implementations will return this entry. When future versions of the IEEE spanning tree protocol are released that are incompatible with the current version, a new value will be defined.
TimeSinceTopologyChange	Time (in hundredths of seconds) since the last topology change was detected by the bridge entity.
TopChange	Number of topology changes detected by the bridge since the management entity was last reset or initialized.
DesignatedRoot	Bridge identifier of the root of the spanning tree as determined by the Spanning Tree Protocol. The value is used as the root identifier parameter in all configuration bridge PDUs originated by this node.
RootCost	Cost of the path to the root as seen from the bridge.
RootPort	Port that has the lowest cost path from the bridge to the root bridge.

Table 7 Status tab fields (continued)

Field	Description
MaxAge	Maximum age of Spanning Tree Protocol information learned from the network on any port before it is discarded, in units of hundredths of a second. This is the actual value that this bridge is currently using.
HelloTime	Amount of time between the transmission of configuration bridge PDUs by this node on any port when it is the root of the spanning tree (in hundredths of a seconds). This is the actual value that this bridge is currently using.
HoldTime	Value of the interval length during which no more than two configuration bridge PDUs shall be transmitted by this node (in hundredths of a second).
ForwardDelay	This time value (in hundredths of a seconds) that controls how fast a port changes its spanning state when moving towards the forwarding state. Value determines how long the port stays in each of the listening and learning states, which precede the forwarding state. This is also used when a topology change has been detected and is underway, to age all dynamic entries in the forwarding database. **Note**: This value is the one that this bridge is currently using, in contrast to BridgeForwardDelay which is the value that this bridge and all others would start using if/when this bridge were to become the root.

Ports tab

The Ports tab in the STG dialog box has port information for the STG.

To view the Ports tab:

1 From the Device Manager menu bar, choose VLANs > STG.

The STG dialog box opens, with the Configuration tab displayed (Figure 5 on page 17).

2 Click the Ports tab.

The Ports tab opens (Figure 7).

Figure 7 Ports tab

Table 8 describes the Ports tab fields.

Table 8 Ports tab fields

Field	Description
StgId	STG identifier assigned to this port.
Priority	Value of the priority field contained in the first octet of the port ID. The other octet is given by the value of the "rcStgPort."
State	The current state of the port as defined by application of the Spanning Tree Protocol. These are the instructions the port takes on a frame when it is received. If the bridge detects a port is malfunctioning, it will list it as "broken(6)." For ports that are disabled, the value is "disabled(1)."
EnableStp	Enables (True) or disables (False) the spanning tree of the port.
FastStart	When this is enabled (True), the port is move to forwarding or blocking state in 4 seconds.

Table 8 Ports tab fields (continued)

Field	Description
PathCost	Contribution of the port to the pathcost of paths towards the spanning tree root, including the current port. 802.1D-1990 specifications recommends that the default of this parameter be in inverse proportion to the speed of the attached LAN.
DesignatedRoot	The unique "Bridge Identifier." This is recorded as Root in the configuration bridge PDUs transmitted by the Designated Bridge for the segment to that the port is attached.
DesignatedCost	Path cost of the Designated Port of the segment connected to the port. The value is compared to the Root Path Cost field in received bridge PDUs.
DesignatedBridge	Bridge identifier of the bridge that this port considers to be the Designated Bridge for this port's segment.
DesignatedPort	Port identifier of the port on the Designated Bridge for this port's segment.
ForwardTransitions	Number of times this port has transitioned from the learning state to the forwarding state.