Release Notes for the BayStack 450 10/100/1000 Series Switch

Software Version V1.1.0

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Bay Networks *Where Information Flows.*™

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Introduction

These release notes contain important information about software release V1.1.0 for the BayStack™ 450 switch that may not be included in the related user guide (*Using the BayStack 450 10/100/100 Series Switch*, Bay Networks® part number 302401-B Rev 00).

The information in these release notes supersedes the applicable information in the user guide. Software release V1.1.0. does not support the BayStack 350-12T or 350-24T switches.

These release notes contain the following sections:

Upgrading the BayStack 450 Firmware

The BayStack 450 switch firmware provides a code load facility that allows you to upgrade the firmware image over any switch port, including any MDA ports. This section provides important information about the upgrade process.

Note: When upgrading the firmware image to software release V1.1.0, you must download *two images* (the *boot code image* and the *agent image*) for proper operation of the switch. The new boot code image must be downloaded *before* the agent image is downloaded.

You *must upgrade all units* with the new code *before* installing the BayStack 400-ST1 Cascade Modules. To access the firmware images, see "Accessing the Firmware Images" on page 4.

Upgrade Process

Upgrading the BayStack 450 to software release V1.1.0 is a two-step process:

1. **Software download of the *boot code image***
2. **Software download of the *agent image***

To properly upgrade the BayStack 450 switch, the boot code image *must be downloaded first*, before you download the agent image.

If the agent image (the operational firmware) is downloaded before the boot code image, the firmware will not be programmed into the BayStack 450 switch FLASH memory. An alternating LED pattern will be displayed on the 10 and 100 Mb/s LEDs for ports 13 to 24 on a BayStack 450-24T switch and on ports 1 to 12 on a BayStack 450-12T switch.

If this happens, cycle the switch power (power off the switch, then power it on). The Software Download screen can then be used to download the new boot code image. After the boot code image download is complete, download the new agent image.

Important Considerations

When upgrading your BayStack 450 Switch, be sure to do the following:

- Download *two images* (the *boot code image* and the *agent image*) for proper operation of the switch. The new boot code image must be downloaded *before* the agent image is downloaded.
- *Upgrade all units* with the new code *before* installing the BayStack 400-ST1 Cascade Modules.
- After upgrading your units, verify the firmware and software versions in the sysDescr field of the System Characteristics screen.

  The firmware version should be **FW:V1.20** and the software version should be **SW:v1.1.0**.

Recovering from a Failed Upgrade

The upgrade process is a fairly straightforward process when implemented correctly (see previous section). However, if you do not follow the correct steps to upgrade your switch it can become temporarily disabled, as follows:

- If the BayStack 400-ST1 Cascade Module is installed before the firmware has been properly upgraded, the code load facility may not function properly.

  In this case, simply remove the Cascade Module and upgrade the firmware properly before reinstalling it.

- If you attempt to download the agent image *before* the boot code image has been properly downloaded, the upgrade may fail.

  The agent firmware can detect an incompatible revision and will discontinue programming itself into FLASH memory. This condition is indicated by a steady pattern of alternating LEDs.

  The switch will not automatically reset. To recover from this condition, you must cycle power to the switch, upgrade the boot firmware, and upgrade the agent firmware.

Stack Installation Tips

Consider the following tips when installing your stack:

- All the units must have the same image before they are put together as a stack.

  Units with software release versions that are different from the base unit will not join the stack. This will be indicated by the blinking CAS Up and CAS Dwn LEDs on those units.

- You should select only one unit (preferably the top unit or the bottom unit) as the base unit, by setting the Unit Select Switch on the cascade module to the Base (up=Base) position.

- When combining two stacks into one stack or breaking apart one stack into two stacks, use the Renumbering Screen to blank out the New Unit Numbers and do a reset.

  This will cause all units to obtain unit numbers according to their physical location with respect to the base unit.

Accessing the Firmware Images

You can access the firmware image files directly from the internet, as follows:

1. **Go to** *support.baynetworks.com/software/ethernet/baystack_450.html*
2. **Under the Operational Software heading, click on release 1.1.0 at the BayStack 450 boot code link.**

   Follow the prompts to download the BayStack 450 boot code image. The boot code image filename is *b4501101.img*
3. **After the BayStack 450 boot code image is downloaded, click on release 1.1.0 at the BayStack 450 agent link.**

   Follow the prompts to download the BayStack 450 agent image. The agent image filename is *b4501102.img*

Upgrade Restrictions

The following restrictions apply when upgrading the switch firmware:

- The firmware cannot be upgraded through a port that is configured for *tagged* traffic.
- During the load process, the ports are configured as follows:

  - Twisted-pair ports: autonegotiation enabled.

  - Fiber optic ports: 100 Mb/s, half-duplex.

  - Gigabit MDA ports: autonegotiation disabled, Preferred Phy set to Right.
- When the BayStack 450 switch is upgraded with the new boot code image, all existing entries in the Event Log will be erased. This corrects a potential problem with the previous software release. A new entry will be written to the Event Log confirming the upgrade of the boot code image.

For detailed information about downloading a new software image, see “Chapter 3, “Using the Console Interface,” in the *Using the BayStack 450 Switch* user guide.

Bay Networks Online Documentation

To be sure you have the latest updates to your product documentation, including these release notes, visit the Bay Networks Web site at the following location:

http://www.support.baynetworks.com/Library/tpubs

Find the Bay Networks product for which you need documentation. Then locate the specific category and model or release version for your hardware or software product. Using Adobe Acrobat Reader, you can open the manuals and release notes, search for the sections you need, and print them on most standard printers. You can download Acrobat Reader free from the Adobe Systems Web site, *www.adobe.com.*

Documentation sets and CDs are available through your local Bay Networks sales office or account representative.

Known Restrictions

The following are known restrictions that apply to software release V1.1.0:

- IEEE 802.1D spanning tree parameters cannot be configured from the console interface (CI) menus and screens.

  Configuration support is available through the Bridge MIB using Simple Network Management Protocol (SNMP). Refer to RFC 1493 for more information.

- Tagged bridge protocol data units (BPDUs) are not supported in this release.
- The MultiLink Trunking feature only supports multiport network interface controllers (NICs) that are configured as a single MAC address, single IP address entity.
- The MultiLink Trunking feature does not support gigabit media dependent adapters (MDAs).
- The BayStack 450 switch gigabit MDA ports comply with IEEE 802.3z Draft 3.2 and IEEE 802.3z Draft 4.1; however, the following restriction applies to the autonegotiation feature:
- If a MultiLink Trunk loses a link connection, the spanning tree does not recalculate the path costs.

- When monitoring outgoing frames on a full-duplex port that is a MultiLink Trunk member, Bay Networks recommends that you use the address-base mirroring mode. Using port-base mirroring with this type of configuration could result in some frames not being displayed.
- In full-duplex mode, all broadcast, multicast, and unicast frames with unknown destination addresses (DAs) are not mirrored for the following port-based mirroring modes:

  --> Port A and Port B-->

  <--> Port A and <--> Port B

  Autonegotiation does not restart if an invalid code word is received from the link partner during the autonegotiation process. In cases where autonegotiation fails, disable and then enable autonegotiation from the console interface or TELNET session.
- RMON Alarms and Event entries are *not* saved to nonvolatile random access memory (NVRAM). When a reset condition or power-down sequence occurs, the entries are not preserved. This conforms to the current RFC 1757 standard. All RMON Alarms and Events must be reentered.
- The RMON Event Log table's secondary index is not incremented when all of the table's entries have been used. In this case, the existing indexes are reused. Thus, the index number cannot be used to indicate the total number of log entries received.
- When connecting a console terminal to an operating switch through the switch's serial Comm Port, the console may display a blank screen. This is a normal condition. Press [Ctrl]-C to refresh the screen or, to get beyond the Bay Networks logo screen, press [Ctrl]-Y.
- Software release V1.1.0 does not support MultiLink Trunks with trunk members distributed across different switches in the stack. All trunk members in each MultiLink Trunk must reside on the same switch.
- Using the the Port Mirroring feature in a standalone switch configuration causes Spanning Tree participation for monitor port to be disabled. If the same standalone switch is then inserted into a stack, the Spanning Tree participation for the previously configured monitor port *remains* disabled. You must manually reenable Spanning Tree Participation via the console.
- You must assign an IP address to the switch/stack *or* disable Proxy from the IGMP Configuration screen to receive IP Multicast packets.

- When a new unit is added to the stack or if an existing unit is removed from the stack, IP management becomes unavailable for approximately 30 seconds.

  During this time period, the following can occur:

  - Packets will be lost when performance testing with SmartBits or any other traffic generator.
  - IP Multicast streams will stop receiving.
  - TELNET sessions will time out and users will lose their TELNET connection without warning.
  - ICMP echo (PING) requests will not receive responses.
  - All IP related processes will fail temporarily.
- When a unit changes from switch to stack operation, or vice versa, the IP address of the switch/stack will change. As a result, all existing management using the previous IP address is lost until the user reconnects using the new IP address.
- Redundant gigabit Phys *cannot* be used to create two different paths.
- The spanning tree configuration must be the same on both ends of a MultiLink Trunk.

Known Problems

The following problems are known to exist in software release V1.1.0:

- Gigabit MDA ports count oversized frames (that are larger than 1785 bytes) as both oversized frames *and* as lost frames.
- MDAs must be *firmly secured* in the chassis for proper operation. Be sure to secure the MDA in the chassis by *firmly* tightening the two thumbscrews on the MDA front panel.
- When the autonegotiation setting on a gigabit MDA port is changed from enabled to disabled, it does not take effect until the port connection is physically disconnected and then reconnected.
- A link state cannot be established when a cable that is 100 percent utilized is plugged into a BayStack 450 switch port. As soon as a break in the traffic occurs, the link state is established.

- When the BayStack 450 switch is connected to an Alteon network interface controller (NIC), the switch learns invalid MAC addresses whenever autonegotiation for a gigabit MDA port is enabled (the invalid MAC addresses eventually age out).

  This problem occurs only when the switch is reset (via the console interface main menu or during a power cycle) and does not affect the correct operation of the BayStack 450 switch.

- A maximum of 85 RMON History Control entries per stack unit are supported. The entry exists on the unit containing the "ControlDataSource." If an attempt is made to create more then 85 entries on a unit, the unit may experience an operational error.

- When an eventType is specified as snmp-trap(3), traps are sent correctly. However, when an eventType is specified as log-and-trap(4), the events get logged but no traps are sent.

- When you enable a MultiLink Trunk, the MultiLink Trunk screen may incorrectly indicate that a duplicate trunk is being created. If this happens, you must *disable* all of the other configured trunks and then *enable* the new trunk. Once the new trunk is enabled, you can then enable the other trunks.

Connecting to Accelar Gigabit Ports

The BayStack 450 switch supports gigabit MDA port connections to the Bay Networks Accelar™ switch gigabit ports, with the following restriction:

- Autonegotiation *is not* supported on the Accelar 1000BaseSXWG (ASIC Version GMAC 2). When connecting to this version, disable autonegotiation on the BayStack 450 switch gigabit MDA port.

Autonegotiation *is* supported on the Accelar 1000BaseSXWG (ASIC Version GMAC 4). When connecting to this version, set autonegotiation to enabled (or disabled) at both ends of the communications link. The autonegotiation setting must be identical at both ends of the communications link.

You can determine the ASIC version number for the 1000BaseSXWG gigabit card using the following command from the Accelar console port:

```
Accelar-1100# sh sys info
```

1000BASE-LX Connectors

The 1000BASE-LX (gigabit) MDAs use a longwave 1300 nm fiber optic transceiver to connect devices over single-mode (3 kilometers) or multimode (550 meters) fiber optic cables.

Note: The transceiver must be mode conditioned externally via a special offset SMF/MMF patch cord for 1000BASE-LX multimode applications. The offset SMF/MMF patch cord allows the same transceiver to be used for both multimode and single-mode fiber. See your Bay Networks sales representative for more information about the SMF/MMF patch cord.

The optical performance of this transceiver cannot be guaranteed when connected to a multimode fiber plant without the use of the special offset SMF/MMF (mode conditioning) patch cord.

The 1000BASE-LX MDA transceiver is designed to mechanically accomodate the *single-mode ferrules* used on one end of the special offset SMF/MMF patch cord.

Multimode ferrules can bind and cause damage to the transceiver.

Caution: Do not connect multimode cables directly into the 1000BASE-LX MDA transceiver. Connect a special offset SMF/MMF patch cord into the transceiver, and then connect the multimode cable into the SMF/MMF patch cord.

For more information about gigabit transmission over fiber optic cable and mode conditioning, refer to the following publication:

Reference Note: Gigabit Ethernet Physical Layer Considerations
(Bay Networks part number 201540-B).

The publication is available on the World Wide Web at *support.baynetworks.com/library/tpubs/*

At the Web site, click on Accelar under the Routing Switches heading.

Replacing MDAs

When replacing an installed MDA with another type of MDA, complete the following steps to clear the NVRAM:

1. **Power down the BayStack 450 switch.**

   Remove the AC power cord from the power source.

2. **Remove the installed MDA.**

   Loosen the thumbscrews and remove the MDA.

3. **Cycle the switch power.**

   Power up the switch and wait for the Bay Networks logo screen to appear (approximately 10 seconds); then power down the switch.

4. **Install the replacement MDA.**

   Be sure to *firmly* tighten the two thumbscrews on the MDA front panel (refer to the MDA installation documentation).

5. **Power up the switch.**

Network Management

The BayStack 450 products are not currently supported by Device Manager.

Unix Optivity 8.1.1 and Windows Optivity 7.0.1 support the BayStack 450 switch in standalone mode only.