Release Notes

Date: June 2002

Project: Vixel 9000 Series Switches

Version: 6.2 Release Firmware (Build 290)

Note: To view the latest version of the Vixel 9000 Series Installation & Configuration Guide, download the PDF from Vixel's website at the following URL (available from the Customer Support page):

http://www.vixel.com/User_Documentation/Switches/9000_series/

New Features

With Version 6.2 firmware, the Vixel 9000 Series Switch introduces the following new features:

- Improved Zone Configuration performance
- Improved HBA compatibility.

Switch Passwords

The factory default passwords are listed below for the Command Line Interface (CLI) and Web Manager interface of Vixel 9000 Series Switches running Firmware Version 6.2.

CLI Manage Password	CLI Monitor Password	Web Manager User Name	Web Manager Password
manage	monitor	admin	manage

Notes:

- The default passwords do not change when new firmware is loaded into the switch.
- The Manage Password for the CLI and the Web Manager are the same. Changing one will automatically change the other.
- If you changed your password but forgot what it is, please call Vixel Technical Support for instructions on how to reset the password to the factory default.
- The factory default IP address for the switch is 192.168.1.129.

Technical Notes

The following issues are known conditions of this build. If you have questions or need more information, please contact an authorized Vixel service representative.

Inter-Switch Links (ISLs)

1) The Vixel 9000 Series Switches are fully compliant with the T11 FC-SW2 standard for E-port interoperability with other compliant switches. Interoperability testing with Brocade and McData switches was completed successfully.
2) Vixel 9000 Series Switches have been successfully tested in a large number of homogenous multi-switch configurations—both in complex fabric meshes and in Stealth-3 (loop-switching) Mode.
3) When connecting switches with different zonesets, only the LED on the ISL that is connected first displays that the link is isolated. The LED on the ISL connected last displays as solid green even though the link is isolated.

Note: This firmware version only supports World-Wide Name zone objects. Domain and Port, Fibre Channel Address, and Zone Alias Name zone objects are not supported in this firmware release. Receiving these zone object types will cause the ISL port to isolate.

HBAs

Each HBA listed below has been tested in multiple modes of operation. Configurations tested include Fabric Mode, Stealth-3 Mode, and Fabric (Public/Private) Mode.

Note: Time needed to recover from disruptive events (such as cable pulls) depends on HBA vendor and driver.

This firmware supports the following drivers (listed by vendor, in alphabetical order).

EMULEX HBAs

Model	*Operating System*	*Driver(s)*	*Issues*
LP9002L	NT4.0sp6	v5-4.81a4	Successfully tested*
	Win2000 SP1	v5-4.81a4	Successfully tested*
	Solaris 8	v4.20k	4) HBA may not recognize targets if powered up before switch. *Workaround: Manually set the HBA port on the switch to the desired HBA speed.*
LP8000	NT4.0sp6	v4-4.52a7	Successfully tested—no known problems
	Win2000 SP1	v5-4.52a7	Successfully tested—no known problems
	Solaris 8	v4.20k	Successfully tested—no known problems
LP850	NT4.0sp6 Win2000 SP1	v4-4.52a7 v4-4.52a7	Successfully tested—no known problems Successfully tested—no known problems

Note: Do not use the Emulex Autodetect mode when HBA is connected to switches running Stealth-3 Mode.
Note: Emulex is aware of these issues. The issue resolution process is underway.
**Note: The Driver version 4.4.81a4 was found to cause interoperability issues with the disks in multiple initiator fabrics. Recommend earlier drivers for multiple initiator fabrics.*

JNI HBAs

Model	*Operating System*	*Driver(s)*	*Issues*
FCE-6460-N	NT4.0sp6	Not currently available.	---
	Win2000 SP1	Not currently available.	---
	Solaris 8	v5.1	5) HBA must be set to Loop for it to recognize connection to private storage.

JNI HBAs			
Model	***Operating System***	***Driver(s)***	***Issues***
FCE-6410	NT4.0sp6	jni116x version 3.0.3	6) HBA must be set to Loop for it to recognize connection to private storage. 7) Larger payloads on the HBA require more time to initiate data flow. Once this initialization occurs, traffic flows as expected. 8) HBA may not recover when devices are removed or re-inserted, while in Fabric Mode or Fabric (Public/Private) Mode. *Workaround: Use either Loop or Point to Point mode.*
	Win2000 SP1	jni116x version 3.0.3	See above.
	Solaris 8	Not supported by JNI	---
Note: JNI is aware of these issues. The issue resolution process is underway.			

QLOGIC HBAs			
Model	***Operating System***	***Driver(s)***	***Issues***
QLA2300	NT4.0sp6	v8.1.3	Successfully tested—no known problems
	Win2000 SP1	v8.1.3	Successfully tested—no known problems
	Solaris 8	v3.14	9) For target connectivity when switch is in Fabric Mode or Fabric (Public/Private) Mode, the HBA must be set to Point to Point.
QLA2200	NT4.0sp6	v8.1.3	Successfully tested—no known problems
	Win2000 SP1	v8.1.3	Successfully tested—no known problems
	Solaris 8	v.3.07	Successfully tested—no known problems
QLA2202	NT4.0sp6	v8.1.3	Successfully tested—no known problems
	Win2000 SP1	v8.1.3	Successfully tested—no known problems
	Solaris 8	v3.13	Successfully tested—no known problems
QLA2100	NT4.0sp6	v7.05.05	Successfully tested—no known problems
	Win2000 SP1	v7.05.05	Successfully tested—no known problems
	Solaris 8	v3.03	Successfully tested—no known problems
Note: QLogic is aware of these issues. The issue resolution process is underway.			

Other Switch Issues

10) Private devices are not detected by HBAs across Inter-Switch Links (ISLs) when the switches are running Fabric (Public/Private) Mode. *Workaround: Put HBAs and private devices on the same switch.*

Technical Tips

11) Loading new firmware on the switch causes the Fault LED (amber LED above the serial connector) to blink and user configuration settings to reset to factory defaults after the switch is reset with the new firmware image. The blinking Fault LED indicates that a configuration change has occurred and the switch is operating under the default configuration. To turn off the Fault LED: on the CLI, type **`diag`** at the Root Menu, and then type **`4`** ("clear_errors") at the Diagnostics menu.

12) The switch is not notified of physical device removals in the following situation. A device (such as a RAID) is connected to the switch via a loop device (such as a hub) that is incapable of sensing

device removal. This device is disconnected from the loop device. Because the loop device cannot sense device removal, it does not notify the switch; therefore, the SNS entry for the removed device does not clear.

13) The switch may infrequently boot with a firmware image other than the power-up image. This situation occurs when the power-up image is faulty or when previous boots (two consecutive boots) are interrupted. *To correct this situation, verify that the power-up image is functional, explicitly set the power-up image, and reset the switch.* Instructions for setting the power-up image: On the Web Manager, log in, go to System> Firmware, click **Change Settings**, verify that the Power-up Image is set as desired, and click **Update**. Click **Reset** on the Home page to reset the switch. On the CLI, type **firmware select** from the Root Menu and enter the number for the desired Power-up Image. Type **reset** from the Root Menu to reset the switch.

14) Fibre Channel protocol dictates that connected switches must both be running the same mode—either Fabric or Loop. If a Fabric Mode Vixel switch is connected to a Stealth-3 Mode Vixel switch, the port on the Fabric Mode switch displays as E_Port (which indicates the invalidity of this configuration). Before connecting Vixel switches, make sure both switches are running the same mode.

15) For JNI 6410, in auto-mode, it is recommended that the disks should power on prior to powering on the HBA or Switch

16) When switches are ordered as Fabric, the switches are shipped set to Fabric Mode as the factory default mode. You can change the switch to Fabric (Public/Private) Mode instead, if desired. Fabric (Public/Private) Mode is used for mixed topologies (where the initiators are public and the targets are private). Note: Changing an older switch (v5.0 or earlier firmware) to factory defaults results in Stealth-3 Mode.

17) To set up V2.2.1 Brocade switches for interoperability with Vixel (Brocade switches running Version 2.2.1 firmware): Make sure no zoning is enabled on the Brocade or Vixel switches. Zoning with other switch vendors is not supported for this Brocade firmware version.

18) To set up V2.3+ Brocade switches for interoperability with Vixel (Brocade switches running Version 2.3 firmware or higher):
    - Run the configure command at the Brocade CLI and set parameters as follows:
      - Under Fabric Parameters, set VC encoding address mode to 0.
      - Under Switch Operating Mode, set Interoperability Mode to 1.
      - Under Zoning Operation Parameters, set Standard Mode to 1.
    - On the Vixel switches, set the Operating Policy to "MCDT Open Fabric." Instructions--Web Manager: go to System> Mode> Operating Policy. CLI: enter the following command (from the Root Menu): **`config mode policy`**

19) To set up firmware V2.6.0a Brocade switches for interoperability with Vixel
    - On the Vixel switches, set the Operating Policy to "MCDT Open Fabric." Run configure command at Brocade CLI and set parameters as follows:
      - Under Fabric Parameters, set CoreswitchPIDformat to 1.
      - Under Switch Operating Mode, set Interoperability Mode to 1.

20) Brocade switches running Version 2.6.0a firmware have InBand management enabled by default. This causes the Brocade switch to isolate any switches that do not respond to an InBand

management command via E_port. Workaround: Disable InBand management on the Brocade switch by running **`msP1Mgmtdeactivate`** from the Brocade command line.

21) In heterogeneous fabrics that contain Brocade switches (Firmware v2.3 or later) and/or McData switches (Firmware v1.01 or later), we recommend that you use only one management agent (station) when configuring zoning in the fabric.

22) Testing showed that the Brocade management tool will periodically indicate that a zone has been disabled when in fact, the zone is still active. Recommend that the deactivation of a zone set be done through the Vixel zone management interface.

23) If you want Domain ID conflicts to be automatically resolved between two (or more) fabrics being connected, set the RCF mode to "destructive" on all switches. This setting may have an impact on traffic recovery time since Domain IDs may change. (On the CLI, the RCF setting is under the config/system/advanced menu.) To view the currently configured Domain ID and RCF setting, do one of the following: On the Web Manager, go to System> System. On the CLI, enter the following command (from the Root Menu): **`show system`**

24) The autospeed option on JNI 6460 HBAs (v5.0 driver for Solaris) does not work. *Workaround: Through the CLI or Web Manager interface, manually set the port speed on the switch to the desired speed.*

25) The Speedlink Negotiation feature has three possible settings: 1) 1Gb, 2) 2Gb, or 3) Auto-detect (default setting). To guarantee that an ISL is operating as a 2Gb ISL, configure the ISL port on at least one switch to 2Gb.

26) The madd command from the config/zone/wwn/zone menu can be used to (a) add a specific WWPN or (b) select from WWPNs within the fabric. For more information, see the *Vixel 9000 Series Installation & Configuration Guide*.

27) There are two ways to block access among connected devices without explicitly noting each WWPN for WWN zoning. (1) Set the Default Zone State to **Blocking (**blocks access when no active Zone Set exists). (2) Activate a Zone Set that contains no Members. For more information, see the *Vixel 9000 Series Installation & Configuration Guide*.

28) Switches running the "MCDT Open Fabric" policy always block access among connected devices when no Zone Set is active; the Default Zone State setting is ignored. (The "MCDT Open Fabric" policy is set under System> Mode on the Web Manager or config/mode/policy on the CLI. The Default Zone State setting is set under Zoning on the Web Manager and config/zone/wwn/state on the CLI.)

29) Some configuration changes require switch or port reset; see the following tables.

Settings that Require a Reset to Take Effect

The list below applies to most but not all management interfaces. Port settings in this table (located in the Ports tab or port menu) require a port reset; all other settings in this table require a switch reset. A switch reset can be performed through a management interface or via a cold boot (unplug and re-plug power).

Note: The Vixel 9000 Series port speed setting is effective immediately when set through the Web Manager or CLI. When set through other interfaces, this setting requires a port reset to take effect.

Setting (in order of appearance in CLI)	***Location***	
	Web Manager (Vixel 9000 Series)	***CLI***
Type (port type)	Ports	config/port
Stream (frames per route request)	"	"
Credit (BB Credit for port)	"	"
MRBS (maximum receive buffer size)	"	"
RBS (max receive buffer payload size)	Ports> Advanced	config/port/advanced
TBS (maximum transmit buffers)	"	"
EDTOV (error detection time-out value)	"	"
RATOV (resource allocation time-out value)	"	"
ALTOV (loop initialization time-out value)	"	"
LPTO (loop connection timeout)	"	"
RXTHRSH (receive credit threshold)	"	"
TXTHRSH (transmit available threshold)	"	"
port speed <Vixel 9000 Series>	(no reset needed)	(no reset needed)
Ethernet Mode	System> System	config/system
System Domain ID	"	config/system/advanced
Private Addresses (Fabric (Public/Private) Mode)	"	"
Priority (principal switch priority)	"	"
Loop Fabric Address	"	"
IP Address (Ethernet)	System> Com	config/com
Netmask (Ethernet)	"	"
Default Gateway (Ethernet)	"	"
SLIP Address	"	"
SLIP Netmask	"	"
Console Mode (operating mode: command or slip)	System> System	config/com/console
Address Mode	System> Mode	config/mode
Alt JBOD Add Mode (Stealth-3)	"	"
Stealth Master (Stealth-3)	"	"
Power-up Image (firmware for next boot)	System> Firmware	firmware >select
Select Ethernet LED behavior	N/A	diagnostics/system >ethled
Port Address Setting (Stealth-3)	System> Stealth-3	N/A
Advanced Port Settings (Stealth-3)	System> Stealth-3	N/A

Settings that Take Effect Immediately

The settings listed below take effect immediately when set through CLI commands or the Web Manager's **Update** button.

Setting (in order of appearance in CLI)	*Location*	
	Web Manager (Vixel 9000 Series)	*CLI*
Fault LED Severity	System> Events	config/event >led_sev
Event Log Severity	"	config/event >event_sev
Clear event log	"	config/event >clear_log
Reset fault LED	"	config/event >reset_led
(zone settings; WWN or port-based)	Zoning	config/zone
Name (port name)	Ports	config/port
PRLI (PLOGI/PRLI Probing)	"	"
FAN (Fabric Address Notification)	"	"
RSCN (registered state change notifications)	"	"
System Name	System> System	config/system
Location (system location)	"	"
Contact (system contact)	"	"
System Time (format xx:xx:xx)	"	"
Date (system date, format xx/xx/xxxx)	"	"
RCF destructive mode	"	config/system/ advanced
Re-routing Delay	"	"
(password changes)	"	config/password
(license key settings)	System> Key	config/key
Modem Init String	System> Com	config/com
Operating Policy	"	"
(trap settings)	System> Traps	config/system/trap
Clear Link Statistics	Statistics> Link	show/link >clear
Load New Image (firmware load)	System> Firmware	firmware >load
Clear system errors	N/A	diagnostics >clear_errors
Reset switch settings to factory default	"	diagnostics/system >default
Send PLOGI/PRLI to all devices on port	"	diagnostics/port >prli
Enable or disable a specified port	N/A	diagnostics/port >mode