



Product Release Notes for 3ware 9.5.3

Supporting 9690SA and 9650SE Controllers

READ ME FIRST!

Introduction

Thank you for purchasing an LSI 3ware SATA+SAS RAID controller card. This document describes important recommendations that are not included in the Installation Guide or the User Guide. Please read this document before you contact Technical Support.

For additional information, refer to these sources:

- Main 3ware web site
<http://www.3ware.com/products/index.asp>
- User documentation
<http://www.3ware.com/support/userdocs.asp>
- Knowledge base
<http://www.3ware.com/KB/kb.asp>
- Software downloads
<http://www.3ware.com/support/download.asp>
- System and drive compatibility lists
http://www.3ware.com/products/sys_compatibility.asp
- Service and support
<http://www.3ware.com/support/index.asp>
- U.S. phone numbers
888-646-4566 (U.S. only) or 408-433-4567
- European phone number
00 44 (0)118 936 25 01

NOTE Check the [Service and Support](#) page at the 3ware web site for the latest updates and to sign up for the 3ware Technical Newsletter.

NOTE For information on motherboard, hard drive, and enclosure compatibility, refer to the [System Compatibility](#) page at the 3ware web site for tested hardware configurations. The

information on the System Compatibility page is updated regularly.

Highlights for Release 9.5.3

- This release provides support for VMware 4.0.
- This release provides support for Mac OS X Snow Leopard.
- This release provides support for Microsoft Windows 7.
- This release includes bug fixes and minor enhancements. See “Release Details,” “Errata,” and “Bugs Fixed” for more information.

Release Details

The release has the following components:

- Firmware version: 4.10.00.007
 - 3BM (3ware BIOS Manager) version: 4.08.00.002
 - BBU (Battery Backup Unit) version: 2.00.00.023
- 3DM 2 version: 2.09.01.004
- 3DM 2 for VMware version: 2.09.01.005
- CLI version: 2.01.09.004
- FreeBSD 5.x driver version: 3.50.04.003 (source only)
- FreeBSD 6.x driver version: 3.60.04.006
- FreeBSD 7.x driver version: 3.70.05.005
- Fedora Core 11 driver version: 2.26.08.006-2.6.29
- SUSE Linux Enterprise Server (SLES) 11 driver version: 2.26.08.006-2.6.27
- openSUSE 11.1 driver version: 2.26.08.006-2.6.27
- Red Hat Enterprise Linux 5.4 driver version: 2.26.08.006-2.6.18
- Linux 2.4 driver version: 2.24.07.005
- Linux 2.6 upstream version: 2.26.02.013
- Mac OS X v1.2.12
- OpenSolaris driver version: 1.12
- VMware ESX 3.5 update 3 driver version: 2.24.08.021vm35 (Driver is available for download on 3ware.com web site under 9.5.1 release)
- VMware ESX 4.0 update 1 driver version: 2.26.08.035vm40 (Driver is available at: <http://www.3ware.com/KB/article.aspx?id=15548>)
- Windows miniport driver version: 3.00.04.070

Operating System Support

These operating systems are supported for Intel x86 32-bit processors and Intel x64 64-bit processors:

- FreeBSD 6.4 and 7.2
- Linux 2.4 and 2.6 (2.6.8 through 2.6.31) kernels
- Fedora Core 11
- OpenSUSE 11.1
- SUSE Linux Enterprise Server (SLES) 11
- Red Hat Enterprise Linux 5.4
- Linux other distributions: <http://www.3ware.com/KB/article.aspx?id=14546>
- Mac OS X 10.5.0 or later, 10.6.0 or later
- OpenSolaris 2009.6
- VMware 3.5 update 3 or later
- VMware 4.0 update 1 or later
- Windows XP, Vista, 2003, 2008, Windows 7

Errata

Older 3ware Drivers and Management Software Are Not Compatible with this Release

IMPORTANT Drivers and software released prior to version 9.5.2 are not fully compatible with the firmware in this release. You must upgrade to a 3ware driver and a software level of 9.5.2 (or later) before you update the firmware on your 9690SA or 9650SE controllers.

3ware 7/8000 Series Units Are Deleted when Removed (SCR-233)

IMPORTANT Do not use the CLI or the 3DM 2 interface to remove or export any RAID unit from a 7/8000 series controller with the exception of JBOD units. If you remove or export any non-JBOD RAID unit using these interfaces, the unit is deleted and is recoverable only with the help of 3ware Technical Support.

3ware 9.5.3 Driver for Fedora Core 11 Does Not Load on Primary Storage (SCR-2154)

Due to an installer issue, the Fedora Core 11 operating system does not load the latest 3ware 9.5.3 driver when you install the operating system on a 3ware controller. Run the workaround as documented in the `install.txt` file that is included on the storage medium that contains the driver software.

3ware User Guide and the HTML Bookshelf Do Not Include 9.5.3 Features

The 3ware User Guide is not updated for version 9.5.3. Refer to the version 9.5.2 addendum that is included on the CD. This document is also available at:

<http://www.3ware.com/support/userdocs.asp>.

Controller Resets Might Occur with VMware ESX 3.5 and 4.0 (SCR-874)

On VMware systems, a controller reset might occur when you upgrade the 3ware firmware or when you remove a drive from a redundant array. The system will, however, recover successfully after resetting.

Initialization Stays for Hours at 100 Percent Complete after a RAID 6 Double-Drive Rebuild Completes when Rapid RAID Recovery Is Enabled (SCR-2182)

Although the system indicates that initialization is 100 percent complete after the first pass, the initialization process continues through a second pass. This problem will be fixed in an upcoming release.

Local Time Issue with openSUSE 11.1 and SLES 11 (SCR- 02164)

On openSUSE 11.1 and SLES 11, a system set for local time will post asynchronous event notification (AEN) messages with a GMT timestamp. This difference in time will delay the start of scheduled events that include (but are not limited to) rebuilds, verifies, initializations, and migrations. This problem has been fixed with the openSUSE 11.2 distribution. At the time of this writing, there is no service pack solution for the SLES 11 distribution. SLES 11 systems set to GMT time will not be affected by this problem.

Note for OpenSolaris when Creating a UFS File System on a Newly Created Device (SCR-2087)

When creating a UFS file system in Open Solaris 2009 v6, you must use the `-T` option to avoid a possible system hang:

```
newfs -T /dev/rdisk/cx/tx/dx/sx
```

Maximum Number of Units Restricted on a UFS File System (SCR-2157)

To support eight or more units on Open Solaris 2009 v6, use the ZFS file system. There are limitations with eight or more units when using the UFS file system.

Installing FreeBSD 7.2 64-bit OS (SCR-2172)

To install the FreeBSD 7.2 64-bit OS on a unit managed by a 3ware controller, use the 3ware driver that comes with the FreeBSD distribution. After the FreeBSD OS installation is complete, upgrade to the latest 3ware driver using the FreeBSD driver installation instructions found in the 3ware User Guide.

**WinAVAlarm Does Not Sound on 64-bit Windows Systems
(SCR-1161)**

No alarm is audible with Windows 64-bit systems when the WinAVAlarm option is activated for an AEN.

SAS 6Gb/s Expanders Are Not Supported on the 9690SA Controller

Do not use SAS 6Gb/s expanders with the 9690SA controllers.

Bugs Fixed

**3Ware 9690SA Controllers Are Not Detected in Some New Motherboards
(SCR-2038)**

9690SA controllers shipping with firmware version 9.5.3 or later firmware have updated PCIe transmit signal strength. If an older controller is not detected or comes up as a x1 PCIe link, refer to this article in the knowledge base:

<http://www.3ware.com/KB/article.aspx?id=15581>

**Drive Spindle Speed Might Be Shown Incorrectly
(SCR-1164)**

In certain cases, drive spindle speeds might be incorrectly reported. The problem is fixed in this release.

**Controller Might Reset if You Remove a Drive While the Controller Is Writing to the Array
(SCR-1973)**

The problem is fixed in this release.

**Basic Auto-Verification Does Not Always Start at the Scheduled Time
(SCR-2035)**

The problem is fixed with this release.

**Performance Drops by approximately 50 Percent when Verify Mode Is Set to Low Latency and the Verify Task Rate Is Set to 1 (Fastest I/O)
(SCR-2024)**

Performance is improved with this release when these settings are used.

**Successfully Recovered Drive Timeouts Cause the Drive Status to Change to DEVICE-ERROR
(SCR-2031)**

The DEVICE-ERROR drive status should appear only for unrecovered errors. This problem caused the DEVICE-ERROR status to appear for a recoverable drive timeout. With this release, an AEN is still sent when a recoverable drive timeout occurs, but the status of the drive is not changed.

**Detection of Certain Drive Models Can Take Too Long
(SCR-2039)**

With some drive models, delay in detecting the drives might cause a system to fail to boot. The problem is fixed with this release.

**Controller Might Hang or Have a Soft Reset after a Drive Timeout or in Case of a Bad Drive
(SCR-2040, 2050, 2049)**

This problem affected some systems with defective drives or with drives that had timeout issues. In these cases, the controller might hang. The problem is fixed with this release.

**Controller Has a Soft Reset when Running I/O on RAID 1 Arrays
(SCR-326)**

When a storage array using RAID 1 experiences very high I/O rates, the controller might experience frequent soft resets. The problem is fixed with this release.

**Write DPO Is Not Detected Correctly by the Linux Kernel
(SCR-1568)**

The problem is fixed in this release.

**Processing of I/Os for Other Units Is Delayed when One Unit Is in Error Recovery Mode for a Link Bounce
(SCR-1977)**

The problem is fixed in this release.

**Controller Hangs after the Power Fails if the BBU Firmware Update Has Just Completed
(SCR-2069)**

The controller cannot recover correctly after a power failure when an update of the controller firmware has just completed. The problem is fixed in this release.

**Controller Resets after a Drive Is Pulled if the SAS Expander Does Not Respond to a Drive Hard Reset from the Controller
(SCR-2116)**

3ware 9690SA controllers waited too long for a SAS expander to respond to a request from the controller for a hard reset of a drive. The problem is fixed in this release.

**Background Tasks, Such as Verify and Initialization, Fail to Complete when Media Errors Occur on Certain WD Drives
(SCR-2053)**

In rare cases, a background task might fail if a drive took longer than anticipated to complete the transfer of a data frame during a read operation. The problem is fixed in this release.

CLI /cx show all Command Does Not Display the Verify and Rebuild Rates (SCR-1733)

In this release, the CLI /cx show all command displays the verify rate and the rebuild rate, as well as the verify mode and the rebuild mode.

For the MacOS, the CLI Does Not Correctly Report Daisy-Chained SAS Expanders (SCR-1763)

This problem might occur when four SAS expanders are connected as a daisy chain. The CLI does not display the configuration correctly. The problem is fixed in this release.

Unable to Use the CLI to Create a Unit with Auto Verify Disabled (SCR-1852)

In this release, the noautoverify option has been added. This option is available when a unit is created using the CLI. When the noautoverify option is not used, Auto Verify is still enabled by default.

With the 9650SE Controller, the CLI Does Not Have Support for Displaying the PHY Summary Page (SCR-1910)

The /cx show phy command now shows the PHY summary page on systems with the 9650SE model controller.