



Release Notes for 9.5.1

(Supporting 3ware 9690SA and 9650SE controllers)

READ ME FIRST!

Introduction

Thank you for purchasing the AMCC 3ware SAS/SATA RAID Controllers. This document describes important recommendations that are not included in the Installation and User Guides. In order to better assist you, please read this document prior to calling technical support.

For additional information, see our web site at:

<http://www.3ware.com/products/index.asp>

User Documentation:

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

Knowledgebase:

<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>

Main U.S. Phone: 800-840-6055 (US only) or 858-535-6517
European Phone: 00 44 (0)118 936 25 01



9.5.1 Release Highlights

- Significantly reduced rebuild time for NTFS, FAT and FAT32 with Rapid RAID Recovery
- Significantly reduced verify or initialization time when recovering from unclean shutdown without BBU
- Improved multi-stream write and read performance with Advanced Content Streaming
- Improved read performance for data recently written
- Reduced foreground array initialization time on RAID 5, 50 or 6
- Password protection for 3BM
- Support for autocarving LUN sizes greater than 2TB (up to 32TB)
- Drive performance monitoring, to help diagnose drive performance issues
- Improved auto-verify capability that combines a basic, weekly verify schedule with default auto-verify settings
- Various bugs fixed and enhancements – See details below

Release Details

The release is comprised of the following components:

- Firmware version: 4.06.00.004
 - 3BM (3ware BIOS Manager) version: 4.05.00.015
 - Bootloader version: 3.08.00.001 (factory installed)
 - BBU (Battery Backup Unit) version: 2.00.00.023
- 3DM2 version: 2.08.00.007
- CLI version: 2.00.08.007
- FreeBSD 5.x driver version: 3.50.04.003
- FreeBSD 6.x driver version: 3.60.04.005
- FreeBSD 7.x driver version: 3.70.05.003
- Linux 2.4 driver version: 2.24.07.004
- Linux 2.6 driver version: 2.26.07.004 (for old distributions, i.e. Red Hat EL4 Update4, Fedora Core 4)
- Linux 2.6 driver version: 2.26.08.004 (for new distributions, i.e. Red Hat EL5, Fedora Core 6, OpenSuSE 10.2 and later)
- Linux 2.6 driver version: 2.26.02.011 (for upstream kernels 2.6.27 and newer)
 - Drivers for other Linux distributions are available at:
<http://www.3ware.com/KB/article.aspx?id=14546>
- Windows miniport driver version: 3.00.04.020



Operating System Support

- Fedora Core 8 Linux (32-bit and 64-bit x86)
- FreeBSD 6.3 and 7.0 (32-bit and 64-bit x86)
- Red Hat Enterprise Linux 5.2 (32-bit and 64-bit x86)
- OpenSuSE Linux 10.3 (32-bit and 64-bit x86)
- SuSE Enterprise Server 10.0 SP2 (32-bit and 64-bit x86)
- Other Linux distributions support with driver sources
- VMware 3.02 Update 1
- VMware 3.5 Update 2
- Windows XP SP2 or SP3, 2003 SP1 or SP2, Vista, and 2008 (32-bit and 64-bit x86)



Notes

Remember to check the AMCC web site for the latest updates and to sign up for the AMCC 3ware Technical Newsletter: <http://www.3ware.com/support/index.asp>.

Motherboard and hard drive compatibility

Please refer to AMCC's hardware compatibility list for tested configurations. This list will be updated on a regular basis. The hardware compatibility list is located at: http://www.3ware.com/products/sys_compatibility.asp.

3DM2 and CLI support for older 3ware RAID controllers

CLI and 3DM2 may be used to manage older generations of 3ware controller families (e.g.: 9550SXU, 9500S, 8000 and 7000 series).

Bugs Fixed and Enhancements

- Improved rebuild completion times under light I/O load
- Auto-rebuild and Auto-verify settings are now enabled by default
- Faster write performance on Linux ext3 file system
- Fixed Auto-rebuild issue where rebuild will not start if enabled after the unit is degraded
- Increased performance for buffered I/O
- Increased performance for systems sharing data via the CIFS protocol
- Increased the timeout for ATA flush commands from 12 to 14 seconds
- Fixed a controller reset and server hang issue for RAID5 256K striped units when there are large random writes issued to the controller
- Added capability to support MSI in the Linux driver
- Added Chassis Control Unit (CCU) support for 9690SA controllers
- Allow staggered spin-up of drives when hot plugged

Errata

Important: Older drivers and software are not compatible with this release

Drivers and software released prior to 9.5.1 are not compatible with firmware in this release. Please upgrade to a 3ware driver and software that is 9.5.1 or newer prior to updating the firmware on your 9690SA and/or 9650SE controllers.



Some distributions of Linux will not auto-mount the 3ware CD

Due to enhanced security in some recent versions of Linux distributions (where auto-mount uses the noexec mount option), binaries are not allowed to launch directly from the CD media.

If your 3ware CD does not auto start or if you see errors after loading the CD, please use the following procedure:

1. Insert the 3ware CD and mount the CD by clicking on the CD/DVD player icon.
2. Retrieve your mount point information and simply remount the CD by entering the following commands:

```
2.1 mount | grep AMCC
```

This command will return the CD/DVD device name and mount point

```
2.2 mount /mount-point (for example /media/AMCC3wareCD) -o  
remount,exec
```

3. Click on the desktop icon and then click on Autorun.

3DM2 for other Linux distributions

3DM2 may not automatically start on certain Linux distributions (e.g., Ubuntu Linux and Debian). For a workaround see <http://www.3ware.com/KB/article.aspx?id=15126>.

OpenSuSE 10.3 64-bit driver does not load during installation

During installation of openSuSE 10.3 (64-bit only), the 3ware driver will not load from the floppy drive. The workaround is to load the driver directly from the AMCC 3ware CD instead.

Red Hat drivers do not include support for the PAE and XEN kernels

If using Red Hat Enterprise Linux 5 with the PAE or XEN, please refer to 3ware KB article 14546 for additional drivers. In that article we have RHEL 5 drivers that support all kernels. <http://www.3ware.com/KB/article.aspx?id=14546>

Placement of the Software Application Log File

The location of the log file for command logging has been changed. Please see 3ware KB article 15123 for more information. <http://www.3ware.com/KB/article.aspx?id=15123>

Rebuild/migrate rate settings are reversed in CLI

Currently, the Rebuild/Migrate Rate settings are reversed in CLI. For example, a Unit rebuilding with a Rebuild Rate of 5 (Faster I/O) will complete faster than a Unit rebuilding with a Rebuild Rate of 1 (Faster Rebuild).



Arrays created with firmware in release 9.5.1 might not be compatible with controllers using older firmware releases

RAID 1, 10, 5, 50 and 6 arrays created with 9.5.1 will not be readable by controllers with older firmware releases unless the Rapid RAID Recovery option is disabled on the array.

3DM2 and CLI report “Failed” status for certain enclosures

Certain enclosures such as Area Data System DNS 1400 may not report the correct status to our management utilities. In the Area Data System case, the enclosure reports its general status as “FAILED” even through there is no problem with the enclosure. Please check with enclosure manufacturer for latest firmware update.

Limit staggered spin up time to less than 24 seconds

If you enable staggered spin up, make sure to set the total spin up time to less than 24 seconds otherwise you might have issues with certain operating systems.

Disable the audio alarm jumper on Supermicro 836Ex backplane

We found a hardware issue on the Supermicro 836Ex backplane. To ensure reliable functionality, please disable the audio alarm jumper before upgrading to release 9.5.1.

3ware driver not updated when installing Fedora Core 8

If you are planning to use and install Fedora Core 8 on the 3ware RAID controller, please read the installation instructions in the 3ware User’s Guide or on the driver install disk for an important work around.

64 LUNs support on Microsoft Windows

Our shipping driver only supports up to 8 LUNs under Microsoft Windows. If you need more than 8 LUNs, please refer to our KB article 15430 for more information.

3DM Installer Fails with Fedora Core 8 and 9

There is a bug in the libxcb package that shipped with Fedora 8 that prevents the 3ware installer from loading. You can download the fixed version of libxcb-1.0-4.fc8 from <http://download.fedora.redhat.com/pub/fedora/linux/updates/8/SRPMS/> to fix the problem.

Currently the 3ware installer is not supported in Fedora Core 9.

OpenSuSe 10.3 won’t boot

If SuSe 10.3 is installed on an array created with this release, the firmware cannot be downgraded or the system will not boot. This is an issue with how the OS handles the SCSI type 3 serial numbers that is supported on 9.5.1 firmware or later.