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Release notes for the Adaptec ASC-58300, ASC-48300 and ASC-44300 SAS  
HostRAID Controllers dated: AUGUST 2, 2007  
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This release notes contains the following:

1. Description of the release
2. Supported hardware
3. Supported Operating Systems
4. Major functional changes
5. Prerequisites of using the Software
6. Tested Configuration
7. Known Issues
8. Windows Registry Parameters

1. Description of the Release:

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Date of release: August 2, 2007

This is the official software release containing the list of software components listed in the section 3 of the release note.

2. Supported Hardware:

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The software release supports the following hardware listed below:

Adaptec ASC-58300 SAS HostRAID Controller  
Adaptec ASC-48300 SAS HostRAID Controller  
Adaptec ASC-44300 SAS HostRAID Controller

3. Supported Operating Systems:

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Windows Driver 32-bit and 64-bit (AMD & EM-64T) - 1.5-0 Build 11685

- Windows 2003 Server, Standard, Enterprise, Web Edition, and x64 Edition
- Windows XP Professional, and x64 Edition
- Windows Vista Ultimate, Home, Business

Linux Driver - 32 bit - 1.5-0 Build 11685  
Linux Driver - 64 bit - 1.5-0 Build 11686

- Red Hat Enterprise Linux 4.0, IA-32 and x64
- Red Hat Enterprise Linux 5.0, IA-32 and x64
- SUSE Linux Enterprise Server 9.0, IA-32 and x64
- SUSE Linux Enterprise Server 10.0, IA-32 and x64

Netware Driver - 1.5-0 Build 11683  
- Netware 6.5 SP5

### 3.1 Adaptec Storage Manager:

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Adaptec Storage Manager and HRCNF

- 5.10.0 Build 17173

#### Supported OS:

- Windows IA-32 and x64
- Linux IA-32 and x64
- Netware 6.5
- SCO OpenServer 6.0
- SCO UnixWare 7.1.4

### 3.2 BIOS and DOS Tools:

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1. Expansion ROM BIOS (for all hardware) - 2.0-0 Build 1918
2. Adaptec Flash Utility (AFU.EXE) - 2.0-0 Build 1918

#### 4. Major Functional changes:

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1. Greater than 2TB logical drive supported.

#### 5. Prerequisites of Using the Software:

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- BIOS and the driver should use above stated software version.

#### 6. Tested Configuration:

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The software was tested with the Hardware Supported list on the motherboard with the IBM PC/AT compatible PCI-X platforms. These are the various components used during the testing:

- IBM x86 PC/AT compatible platform with Intel Xeon
- Tested with direct attached SATA-I and SATA-II drives
- Adaptec Storage Enclosure 335SAS enclosures with SATA drives

#### 7. Known Issues/Limitations:

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##### 7.1 Windows

###### - All Windows

- Drive Letter may disappear after Medium Error on a Simple Volume  
Drive Letter may disappear after Medium Error on a Simple Volume:  
On a simple volume with Medium error, the error is reported to the Windows OS. All the error handling is done by the operating system. The expected behavior is intermittent and sometimes drive letter disappear.

- OS Caching cause invalid data in file copy from Medium Error locations in specific conditions:

When read medium error occur in simple volume or RAID-0 or a good member of a degraded RAID-1/RAID-10, file copy in Windows Explorer will fail the

first few times but will pass on the later attempts; however, the file gets copied has invalid data in the section where the medium error was. This happens because if the Windows OS caching invalid data.

- System wakes up from S1 standby and may hang with BSOD or at Windows Splash Screen with NVIDIA Video Card GeForce 6200
- Using the "Load Driver" option to replace a same-name inbox driver (adp94xx) fails silently on first attempt.
- Windows XP (32-bit)  
On a Dell Precision 670, Adaptec Storage Manager logfile shows "commands are not responding" error when the system comes up from S3 sleep state with IO on Optimal/Rebuilding R10. The controller will be added after several minutes.
- Windows Vista 32-bit  
When you are updating the driver adp94xx by loading it from a floppy or USB in Windows Vista 32 bit, the system will crash. Restart the system to start the controller. This problem will re-occur if the controller is moved to another slot. The permanent fix for this issue will be part of the Longhorn Server/Vista SP1.

## 7.2 Linux

- Red Hat Enterprise Linux 4 (32-bit)  
Kernel Panic Screen after OS Upgrade from RHEL 4 to RHEL 4 QU3 on a Dell PE 1800/HP ML 370. This is a Linux algorithm issue.
- Red Hat Enterprise Linux 4 QU3 (32-bit)  
Mismatch in order of the drives during POST and disk partition screen with RHEL 4 QU3 if during the installation the boot device was modified.

## 7.3 Netware 6.5

- In Netware 6.5 SP4, when operating RAID functionality using ASM utility (raidman.nlm), switch to server console and reboot, the system will get ABEND during reboot. This is a Java compatibility issue.
- Netware installation on a RAID 10 device may show the controller name as ASC 48300 instead of ASC 58300 if the driver is loaded from floppy.

## 8. Windows REGISTRY PARAMETERS:

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### 8.1 Driver Specific Registry Parameters

WARNING: Altering or adding these driver parameters incorrectly can render your system inoperable. Use them with caution.

Follow the instructions below to enter registry values that affect the configuration information for the adp94xx driver. Note that all HostRAID adapters supported by the

installed driver are affected by the values you enter here.

The key used for this HostRAID release is "adp94xx". To enter driver-specific parameters, follow these steps:

1) Select Run from the Start button.

2) Type "regedt32" and press Enter.

3) Open the registry list to the following location:

HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\adp94xx

If the \Parameters\Device\ keys already exist, skip to step 6 to begin entering parameters. If the keys do not yet exist, follow steps 4 and 5 to create them.

4) Click on the adp94xx key. Select "New -> Key" from the Edit menu, type "Parameters" in the "New Key #1" edit box, and press Enter.

5) Click on the Parameters key. Select the "New -> Key" from the Edit menu, type "Device" in the "New Key #1" edit box, and press Enter. To specify a specific host adapter, append Device with the number of the host adapter. For example, type "Device0" for the first host adapter, "Device1" for the second, etc. If you omit the host adapter number, the configuration information will apply to all supported host adapters.

6) Go to the Parameters\Device key. Select "New -> String Value" from the Edit menu, type "DriverParameters" in the "New Value #1" box, and press Enter twice. The Edit String text box appears. Enter valid parameters in the text box. Use a semicolon to separate multiple parameters. For example:

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<Parameter1>=<Value1>;<Parameter2>=<Value2>;  
MaximumSGList=17;PK=1;
```

NOTE: Changes made with the Registry Editor do not take effect until you reboot your computer.

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Option: Performance/Compatibility Settings

Definition: This registry option tunes the setting for performance purpose. This registry option modifies the maximum number of I/Os and maximum number of scatter gather elements or number of physical breaks. The setting can be set as high or normal. When set to high it modifies the maximum I/Os to 255 and maximum scatter gather list to 33. In this mode, system hibernation may not work. Use the following parameter and value to modify the driver behavior.

To run driver in high performance:  
Use the registry file HIGHPERF.REG.

To run driver in normal mode:  
Use the registry file WHQL.REG.

Follow these steps to change the settings:

- 1) Select Run from the Start button.
- 2) Browse to the folder containing above mentioned version of the HostRAID driver, select file "HIGHPERF.REG" or "WHQL.REG" and click OK.

NOTE: The default value for this parameter is normal mode and it supports system hibernation.

Possible Values: Normal Mode - High Performance Mode  
Default Value: Normal Mode

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Option: ExposeEnclosure

Definition: This registry option changes the appearance of enclosure management devices to the operating system. One can directly edit the registry and apply the required changes to this option as explained in section 8.1.

There is another way to reflect expose enclosure change using the "ENCLOSURE.REG" file. Follow these steps to change the settings:

- 1) Select Run from the Start button.
- 2) Browse to the folder containing above mentioned version of the HostRAID driver, select file "ENCLOSURE.REG" and click OK.

Note: If you use the second option to expose enclosure, then use the "Performance/Compatibility Settings" option to bring driver to Normal Mode using "WHQL.REG" file.

Possible Values: 0-1 (0=do not expose enclosure, 1=expose enclosure)  
Default Value: 0

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## 8.2 Windows Specific Registry Parameters

NOTE: This setting applies to Windows Server 2003, Windows 2000, and Windows XP.

The only Windows-specific parameter that you can currently change is the TimeoutValue. This registry option increases the timeout for all disk class devices (in contrast to the driver-specific registry parameters that affect only your HostRAID adapter).

The default TimeoutValue is 10 seconds. Follow these steps to increase this value to 60 seconds:

- 1) Select Run from the Start button.
- 2) Browse to the folder containing above mentioned version of the HostRAID driver, select the file "TIMEOUT.REG" and click OK.

Note: Changes made with the Registry Editor do not take effect until you reboot your computer.

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