

ReInotes

Release notes for the AAR-1420SA/AAR-1430SA SATA HostRAID dated:
October 19, 2010

This release notes contains the following:

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2. Supported hardware
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1. Description of the Release:

Date of release: October 19, 2010

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

2. Supported Hardware:

The software release supports the following hardware listed below:

- a. Adaptec AAR-1420SA SATA HostRAID controller
- a. Adaptec AAR-1430SA SATA HostRAID controller

3. Supported Operating Systems:

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- Windows Driver 32-bit and 64-bit (AMD & EM-64T) - 1.6-0 Build 11998.3
 - Windows 7, All versions
 - Windows Server 2003, Standard, Enterprise, and x64 Edition

3.1 BIOS and DOS Tools:

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1. Expansion ROM BIOS - 6.0-0 Build 2507
 2. Adaptec Flash Utility (AFU.EXE) - 6.0-0 Build 2507

4. Major Functional Changes:

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1. Added support for drives larger then 2TB in size.

5. Prerequisites of Using the Software:

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- The BIOS and driver should be used with the following software versions:
Adaptec Storage Manager (ASM) and HRCONF - 6.50.0 Build 18584

6. Tested Configuration:

The software was tested with the Hardware Supported list on the motherboard with the IBM PC/AT compatible PCI-X/PCIExpress 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

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7. Known Issues/Limitations:

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1. The Marvell chip on the 1430/1420SA is not compatible with the AMI I2C MG9071/9072 chip found on the Super Micro backplanes SMC SC825TQ, SMC M35TQ, and CSE-733TQ-645. Hence, the enclosure management process cannot be observed using ASM.
 2. In "CI Design 524" enclosure, the BIOS listing of the drives is in reversed order with the cable connection to controller, as the routing in the enclosure is reversed.
 3. Due to memory address conflict between the backplane I2C device and the controller, 1430SA is not detected in Intel SR1500 with I2C Cable connected.
 4. Linux 32-bit and 64-bit
 - During installation of SUSE Linux Enterprise Server 10 using aar81xx driver for SATA HoSTRAID, hard drives are shown as singles even though they are configured as RAID in BIOS.
workaround: Use "broken_modules=sata_mv" boot option during installation.
This will not load sata_mv driver and aar81xx driver gets the drives attached.
 5. Windows 32-bit and 64-bit
 - Resource Conflict in Dell SC430 Server with Multiple Controllers
In Dell SC430 server, when installed with two controllers, there is a resource conflict. Because of this Windows XP cannot be installed on the drives connected to the controllers.
 - Hibernation in SuperMicro X6DHE-G Server
In SuperMicro X6DHE-G server, with Windows Server 2003 SP1, when the system is resuming from Hibernation, deleting the restoration file will fail.
 - 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 some times drive letter disappears.
 - OS causes invalid data in file copy from Medium Error locations in specific conditions
When read medium error occurs 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 due to OS relocates the Medium Error Block with unknown data (even for READ operation).
 - 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
 6. BIOS
 - This applies to AAR-1430SA. If both members of an optimal RAID-1 array are removed and then reinserted back to the same ports without first shutting down the system, any attempt to perform a read operation on the failed R1 array will take longer to respond (approximately 10 to 15 minutes).
 7. To install on to a > 2TB partition, operating systems such as Windows and Linux require a GPT and UEFI environment. The Adaptec HoSTRAID controller does not support UEFI. Attempting to install to a > 2TB partition may be unsuccessful, depending on the operating system. This includes physical and logical drives.
 8. When deleting an array in the Adaptec Storage Manager, it may take several minutes for the array to be removed from the screen. The operation on the drives completes immediately, it is only the display that takes time.

8. Windows REGISTRY PARAMETERS:

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 ADP3132 driver. Note that all HoSTRAID adapters supported by the installed driver are affected by the values you enter here.

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The key used for this HostRAID release is "ADP3132". 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\ADP3132

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 ADP3132 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.

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

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:

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- 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

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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