README.TXT

Adaptec ASR-5085/ASR-5405/ASR-5445/ASR-5805/ASR-51245/ASR-51645/ASR-52445 Unified
Serial Controllers
Adaptec ASR-2045/ASR-2405 Unified Serial Controllers
Adaptec ASR-5405Z/ASR-5445Z/ASR-5805Z Unified Serial Controllers

NOTE: All Adaptec products are UL listed and for use only with UL listed ITE.

as of June 9, 2009

Please review this file for important information about issues
and errata that were discovered after completion of the standard
product documentation. In the case of conflict between various
parts of the documentation set, this file contains the most
current information.

NOTE: The latest firmware, BIOS, drivers and documentation can be
downloaded from www.adaptec.com when they become available.

The following information is available in this file:

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1. Software and Documentation

    1.1. Controller & Utility Software

        Note: The latest versions of firmware, BIOS and driver software
        can be downloaded from www.adaptec.com when they become
        available.

- BIOS

- ACU

- Windows Drivers

    o Windows 2003 Server, Enterprise, Standard (32-bit, 64-bit)
    o Windows 2008 Server, Enterprise, Standard (32-bit, 64-bit)
    o Windows XP All versions
    o Windows Vista All versions

- Linux Drivers

    o Red Hat Enterprise Linux 4.7, IA-32 and x64
    o Red Hat Enterprise Linux 5.3, IA-32 and x64
    o SuSE Linux Enterprise Server 9, IA-32 and x64
    o SuSE Linux Enterprise Server 10, IA-32 and x64

- FreeBSD Drivers

    o FreeBSD 6.4, 7.1

- SCO Drivers

    o OpenServer 6.0
    o UnixWare 7.1.4

- VMware Drivers

    o VMware ESX Server 3.5, 4.0

- Sun Solaris Drivers

    o Solaris 10 Update 4

1.2. Documentation on this CD

    - Adaptec SAS RAID Controllers Installation and User's Guide
    - Adaptec RAID Controller Command Line Utility User's Guide
    - Adaptec SAS RAID Controllers Quick Start Guide
    - Adaptec SAS RAID Controllers README.TXT file

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2. Installation and Setup

  2.1 Installation Instructions

      The Adaptec SAS RAID Controllers Installation and User's Guide
      contains complete installation information for the controllers
      and drivers, as well as complete instructions for all
      utilities. The Adaptec Storage Manager User's Guide
      contains complete installation information for the Adaptec
      Storage Manager software.

  2.2 Adaptec ZMM-100CC Super Cap Card Setup

      If you connect/plug a charged ZMM-100CC Super Cap Card in to a
      controller, you must wait for it to discharge before powering
      up the host system; otherwise, the BIOS will hang during boot.
      You can tell if the cap card is charged by observing the yellow
      LED on the Adaptec ZMM-100DB daughterboard. It shines brightly
      when the cable is first connected, then it goes dim. You must

              wait for it to go out (not just dim) before powering up the
              system. This may take a few minutes, depending on the charge
              level.

    2.3   Power Management Setup

              You must use a compatible combination of Adaptec Storage Manager
              and controller firmware and driver software to use the power
              management feature. All software components must support power
              management. You can download the latest controller firmware
              and drivers from the Adaptec Web site at www.adaptec.com.

    2.4   Linux Setup

              Before installing the Linux operating system on a logical device,
              Adaptec recommends clearing (removing) old data first. If you
              do not remove old data prior to installation, the OS may
              not boot. As a workaround, use the boot parameter 'aacraid.wwn=2'.

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3. General Cautions

    - While an array is being built or cleared, do NOT remove and
      re-insert any drive from that array. Doing so may cause
      unpredictable results for any of the controller's arrays.

    - DO NOT move drives containing an array from one controller
      to another while the power is on. Doing so could cause
      the loss of the array configuration or data, or both.
      Instead, power off both affected controllers, move the
      drives, and then restart.

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4. Known Limitations

    4.1   ACU Utility

          o On some Intel and IBM systems, when you try to run the ACU
            utility, this message appears:

            "Not enough free memory to load the utility!
             Press any key to attempt loading the utility forcibly
             OR Wait for the system initialization to be completed
             [Default]"

            This is normal. On Intel systems, wait for the system
            initialization to be completed. Then the ACU will run. On IBM
            systems, press any key when prompted to load the utility
            forcibly.

          o The ACU erroneously displays deleted logical drives in the
            JBOD list. The logical drive(s) continue to appear in the
            JBOD list until you delete all of the JBODs.

          o With some enclosures, the ACU displays incorrect box/slot
            information for managed disk drives; for example,
            Exp/Phy instead of Box/Slot.

    4.2   Creating an Array from the Adaptec Storage Manager CD

              When you create an array with the Adaptec Storage Manager
              bootable CD, the maximum size of the array is 2 TB.

4.3 Using the Controller with an Adaptec S50 JBOD Enclosure

     Temperature warnings from the Adaptec S50 JBOD Enclosure with
     firmware version T016 are not shown in Adaptec Storage Manager
     (or on the enclosure). To correct the problem, upgrade to the
     latest firmware version.

4.4 UnixWare and OpenServer

     Adding or moving controllers in an existing UnixWare or OpenServer
     system may cause some device resources to change, which may lead
     to the operating system being unable to boot. Currently, there
     is no workaround available in the operating system. Before
     installing the operating system, make sure all PCI devices are
     either enabled or installed.

4.5 OpenServer 6.0

     Arrays may not be displayed correctly, even after you restart
     your computer.

     To resolve the problem:

     As root, run 'resmgr -r -m vtoc' until it fails. Then, as
     root, run '/etc/conf/bin/idconfupdate -f'. Then, reboot.

4.6 SuSE Linux Enterprise Server 10 with Service Pack 2

     If your boot array is installed on the controller, and the boot
     OS is SLES10 SP2 with driver version 1.1.5-2458, you must add
     'aacraid.wwn=1' to the kernel boot command line. Alternatively,
     install the latest aacraid driver.

4.7 Hot-adding Disk Drives

     o If you hot-add multiple disks simultaneously to a large
       configuration (100 disk drives or more), it may take a large
       amount of time before those disk drives appear in Adaptec
       Storage Manager.

     o With Intel Backplanes AXX4DRV3GEXP and AXX6DRV3GEXP, if a drive
       bay is empty at enclosure power on and then a SATA disk drive
       is hot-added into the empty bay, the controller does not detect
       the new disk drive. To work around this issue, remove and
       re-insert the SATA disk.

4.8 SuperMicro Disk Drive Enclosures

     If the controller does not detect disk drives installed in a
     SuperMicro M28E2 Mobile Rack, use backplane SAS connectors
     marked with "SAS In" only.

4.9 Using the Controller with a SuperMicro X7DBE Motherboard

     The ASR-2405 and ASR-2045 do not support the SuperMicro X7DBE
     motherboard. Adaptec recommends using the SuperMicro X7DBE+.

4.10 Using the Controller with a Seagate Barracuda 1TB SATA Drive

     To ensure reliability when using Adaptec 2-series and 5-series
     controllers with a Seagate Barracuda ES.2 1TB SATA Drive
     (ST31000340NS), Adaptec recommends using Seagate firmware
     version AN05 or SN06 or higher. For low-port 5-series

controllers, use Seagate firmware version SN05.

4.11 Intel SE7525RP2 and SE7320EP2 Motherboards

The Intel SE7525RP2 and SE7320EP2 motherboards do not support
Mode 0 flash. These motherboards use 64-bit PCI addressing.
The AFU currently supports 32-bit PCI addresses only.

4.12 Windows Server 2008 64-Bit SCSIport Driver

The Windows Server 2008 64-Bit SCSIport driver is in the process
of being certified and is not supported in this release. Use
the Storport driver instead.

4.13 Boot Drive Failure after OCE/RLM

The system may fail to boot after a boot drive OCE/RLM (online
capacity expansion/RAID level migration). To correct the problem,
verify that the boot drive is still listed as the first logical
device in Adaptec Storage Manager (ASM). If not, use the
Control-A BIOS utility to reselect the proper boot device.

4.14 Online Capacity Expansion (OCE) Limits

This release supports a maximum of 8 concurrent OCE tasks in
the RAID array migration wizard.

4.15 Power Management under FreeBSD

The FreeBSD driver does not support power management in
this release.

4.16 Using RAID10 under FreeBSD

If a RAID10 array fails under FreeBSD the firmware may crash
causing the system to reboot automatically.

4.17 Power Management with Seagate SAS Drive ST31000640SS

Power Management is not supported by the Seagate ST31000640SS
SAS drive. (The drive powers down but will not power up without
rebooting.)

4.18 Linux Cache Synchronization

With Linux driver 1.1-5-2459 (or higher), you may see an improvement
in performance if you suppress cache synchronization. For a
controller with battery back-up, add 'options aacraid cache=6' to
the /etc/modprobe.conf.local file. To completely suppress cache
synchronization, add 'options aacraid cache=2'. Then, reboot.
Note that the smaller value provides no protection in case of a
power outage.

4.19 Listing Devices in VMware ESX 4.0 Console

After an array is deleted with ARCCONF, the VMware ESX 4.0 Console
will hang if you try to list available devices with 'fdisk -l'.
As a work-around, rescan first, then try 'fdisk -l'.

4.20 BIOS Hangs During Boot

Possible Cause: After a system shutdown, the daughterboard remains
active for several minutes. The Super Cap connector may have been

        improperly removed and/or re-inserted with charge still present.

        Solution: Plug the Super Cap connector in when the system is OFF
        and, if the yellow activity LED is illuminated on the ZMM-100DB
        daughterboard attached to RAID Controller, wait for the LED
        activity indicator to go out. This may take several minutes.
        The system should then boot normally.