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README.TXT

Adaptec Storage Manager (ASM)
as of July 23, 2008
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Please review this file for important information about issues
and erratas 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.

The following information is available in this file:

    1. Software Versions and Documentation
        1.1   Adaptec Storage Manager
        1.2   Documentation
    2. Installation and Setup Notes
        2.1   Supported Operating Systems
        2.2   Minimum System Requirements
        2.3   General Setup Notes
        2.4   Linux Setup Notes
        2.5   VMware Setup Notes
    3. General Cautions and Notes
        3.1   General Cautions
        3.2   General Notes
    4. Operating System-Specific Issues and Notes
        4.1   Windows - All
        4.2   Windows for EM64T and AMD-64
        4.3   Windows Vista Business and Ultimate
        4.4   Linux
        4,5   FreeBSD
        4.6   Linux and FreeBSD
        4.7   VMware
    5. RAID Level-Specific Notes
        5.1   RAID 1 and RAID 5 Notes
        5.2   RAID 10 Notes
        5.3   RAID x0 Notes
    6. Power Management Issues and Notes
    7. ARCCONF Notes
    8. Other Issues and Notes


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1. Software Versions and Documentation

    1.1. Adaptec Storage Manager Version 6.0

    1.2. Documentation on this CD

        PDF format*:

        -  Adaptec Storage Manager User's Guide for Direct Attached Storage
        -  Adaptec RAID Controller Command Line Utility User's Guide

        *Requires Adobe Acrobat Reader 4.0 or later

        HTML and text format:
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              -  Adaptec Storage Manager Online Help
              -  Adaptec Storage Manager README.TXT file


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    2. Installation and Setup Notes

       - The Adaptec RAID Controllers Installation and User's Guide
         contains complete installation information for direct attached
         RAID controllers and drivers. The Adaptec Storage Manager User's
         Guide contains complete instructions for all utilities and
         Adaptec Storage Manager software for direct attached storage.


       2.1 Supported Operating Systems

          - Microsoft Windows 32-Bit:

             o Windows Vista - All versions
             o Windows Server 2008
             o Windows Server 2003 Enterprise, Standard, and Web Edition*
             o Windows XP Professional

          - Microsoft Windows for EM64T and AMD-64:

             o Windows Vista Ultimate and Business
             o Windows Server 2003 Enterprise, Standard, and Web Edition*
             o Windows XP Professional

          - Linux 32-Bit:

             o Red Hat
                o Red Hat EL 4.0 AS/ES/WS*
                o Red Hat EL 5.0 AS/ES/WS*

             o SuSE
                o SuSE Linux Enterprise Server 9*
                o SuSE Linux Enterprise Server 10*

             o VMware
                o VMware ESX Server 3.0.2, 3.5

          - Linux for EM64T and AMD-64:

             o Red Hat
                o Red Hat EL 4.0 AS/ES/WS*
                o Red Hat EL 5.0 AS/ES/WS*

             o SuSE
                o SuSE Linux Enterprise Server 9*
                o SuSE Linux Enterprise Server 10*

          - UnixWare:

             o SCO UnixWare 7.1.4

          - OpenServer:
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o SCO OpenServer 6.0

    - Solaris:

          o Sun Solaris 10 Update 4

    - FreeBSD:

          o FreeBSD 6.2, 6.3

          NOTE: The ASM installer for FreeBSD is available as a
                Web release only. You can download ASM for FreeBSD
                from the Adaptec Web site at www.adaptec.com.

*Out-of-box and current quarterly update or service pack

2.2 Minimum System Requirements

    o Intel Pentium Compatible 1.2 GHz processor
    o 512 MB RAM
    o 135 MB hard disk drive space
    o Greater than 256 color video mode

2.3 General Setup Notes

- You can configure Adaptec Storage Manager settings on other
  servers exactly as they are configured on one server. To
  replicate the Adaptec Storage Manager Enterprise view tree
  and notification list, do the following:

    1. Install Adaptec Storage Manager on one server.

    2. Start Adaptec Storage Manager. Using the 'Add remote system'
        action, define the servers for your tree.

    3. Open the Notification Manager. Using the 'Add system'
        action, define the notification list.

    4. Exit Adaptec Storage Manager.

    5. Copy the following files onto a diskette from the directory
        where the Adaptec Storage Manager is installed:

        RaidMSys.ser --> to replicate the tree
        RaidNLst.ser --> to replicate the notification list
        RaidSMTP.ser --> to replicate the SMTP e-mail notification list
        RaidJob.ser --> to replicate the jobs in the Task Scheduler

    6. Install Adaptec Storage Manager on the other servers.

    7. Copy the files from the diskette into the directory where
        Adaptec Storage Manager is installed on the other servers.

2.4 Linux Setup Notes

- To run Adaptec Storage Manager under Red Hat Enterprise Linux for
  x64, the Standard installation with "Compatibility Arch Support"

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   is required.

- To install Adaptec Storage Manager on Red Hat Enterprise Linux,
  you must install two packages from the Red Hat installation CD:

  o  compat-libstdc++-7.3-2.96.122.i386.rpm
  o  compat-libstdc++--devel-7.3-2.96.122.i386.rpm

  NOTE:  The version string in the file name may be different
         than above. Be sure to check the version string on the
         Red Hat CD.

  For example, type:

  rpm --install /mnt/compat-libstdc++-7.3-2.96.122.i386.rpm

  where mnt is the mount point of the CD-ROM drive.

- To install Adaptec Storage Manager on Red Hat Enterprise Linux 4,
  you must install the following package from the Red Hat
  installation CD:

  o  xorg-x11-deprecated-libs-6.8.1-23.i386.rpm

  NOTE:  The version string in the file name may be different
         than above. Be sure to check the version string on
         the Red Hat CD.

- To install Adaptec Storage Manager on Red Hat Enterprise Linux 5,
  you must install one of these packages from the Red Hat
  installation CD:

  o  libXp-1.0.0-8.i386.rpm     (32-Bit)
  o  libXp-1.0.0-8.x86.rpm      (64-Bit)

- To install Adaptec Storage Manager on Novell Linux Desktop 9
  Service Pack 1 for 64-bit systems, you must install two
  packages from the Novell Linux installation CD:

  - liblcms-devel-1.12-55.2.x86_64.rpm
  - compat-32bit-9-200502081830.x86_64.rpm

  NOTE:  The version string in the file name may be different
         than above. Be sure to check the version string on the
         Novell Linux CD.

2.5 VMware Setup Notes

- To install and use Adaptec Storage Manager on the VMware ESX Server:

  1.  Mount the Adaptec Storage Manager installation CD:

      mount -r /dev/cdrom /mnt/linux/

  2.  Change to the manager directory on the CD-ROM:

      cd /mnt/cdrom/linux/manager
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3. Type the following command to install the 32-bit Linux
   Adaptec Storage Manager on the VMware ESX Server:

   rpm --install ./StorMan*.rpm

4. Type the following command to open the range of ports required
   by Adaptec Storage Manager to connect remotely:

   esxcfg-firewall -o 34571:34581,tcp,in,"StorMan"

5. Install Adaptec Storage Manager on a Windows or Linux machine.

6. From the Windows or Linux client, connect to the Adaptec
   Storage Manager Agent on the VMware ESX Server using the
   ASM GUI.

- The Adaptec Storage Manager Agent on the VMware ESX Server cannot
  be monitored from a guest operating system.

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3. Adaptec Storage Manager General Cautions and Notes

   3.1 General Cautions

- While building or clearing a pool, do not remove and reinsert any
  drive from that pool. Doing so may cause unpredictable results.

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

- When using Adaptec Storage Manager and the CLI concurrently,
  configuration changes may not appear in the Adaptec Storage
  Manager GUI until you refresh the display (by pressing F5).

   3.2 General Notes

- Adaptec Storage Manager requires the following range of ports
  to be open for remote access: 34570-34580 (TCP), 34570 (UDP),
  34577-34580 (UDP).

- Adaptec Storage Manager generates log files automatically to
  assist in tracking system activity. The log files are
  created in the directory where Adaptec Storage Manager is
  installed.

   o RaidEvt.log - Contains the information reported in
                    Adaptec Storage Manager event viewer for all
                    local and remote systems.

   o RaidEvtA.log - Contains the information reported in
                    Adaptec Storage Manager event viewer for the
                    local system.

   o RaidNot.log - Contains the information reported in the

Notification Manager event viewer.

    o RaidErr.log - Contains Java messages generated by
                     Adaptec Storage Manager.

    o RaidErrA.log - Contains Java messages generated by the
                     Adaptec Storage Manager agent.

    Information written to these files is appended to the existing
    files to maintain a history. However, when an error log file
    reaches a size of 5 Mbytes, it is copied to a new file with
    the extension .1 and the original (that is, the .LOG file) is
    deleted and recreated. For other log files, a .1 file is created
    when the .LOG file reaches a size of 1 Mbyte. If a .1 file already
    exists, the existing .1 file is destroyed.

  - In the Event viewer, Adaptec Storage Manager reports both the
    initial build task for a pool and a subsequent Verify/Fix
    as a "Build/Verify" task.

  - When displaying information about a physical device, the device,
    vendor and model information may be displayed incorrectly.

  - After using a hot spare to successfully rebuild a redundant
    pool, information about the hot spare drive may not display
    as expected. Adaptec Storage Manager may continue to
    display it as a global hot spare.

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4. Operating System-Specific Issues and Notes

    4.1 Windows - All

  - The Java Virtual Machine has a problem with the 256-color
    palette. (The Adaptec Storage Manager display may be distorted
    or hard to read.) Set the Display Properties Settings to a
    color mode with greater than 256 colors.

  - When you shut down Windows, you might see the message
    "unexpected shutdown". Windows displays this message if the
    Adaptec Storage Manager Agent fails to exit within 3 seconds.
    It has no affect on file I/O or other system operations and can
    be ignored.

    4.2 Windows for EM64T and AMD-64

  - RAID controllers do not produce an audible alarm on the following
    64-bit Windows operating systems:

    o Windows XP Professional x64 Edition
    o Windows Server 2003 x64 Edition (all versions)

    4.3 Windows Vista Business and Ultimate (64-bit versions)

  - Flashing a RAID controller on Windows Vista 64-bit systems
    is not supported in this release of Adaptec Storage Manager.

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    NOTE:   Although you can run the image update wizard from
            Adaptec Storage Manager on a Windows Vista 64-bit
            system, the wizard does not run to completion.

4.4 Linux

- When you delete a pool, the operating system can no longer
  see the last pool. WORKAROUND: To allow Linux to see the
  last pool, restart your system.

- The controller does not support attached CD drives during OS
  installation.

- To remotely manage a Linux system from a Windows system, you must
  use the standalone GUI.

- On certain versions of Linux, you may see messages concerning font
  conversion errors. Font configuration under X-Windows is a known
  JVM problem. It does not affect the proper operation of the
  Adaptec Storage Manager software. To suppress these messages,
  add the following line to your .Xdefaults file:

  stringConversionWarnings: False

4.5 FreeBSD

- On FreeBSD systems, JBOD disks created with Adaptec Storage Manager
  are not immediately available to the OS. You must reboot the
  system before you can use the JBOD.

4.6 Linux and FreeBSD

- If you cannot connect to a local or remote Adaptec Storage Manager
  installed on a Linux or FreeBSD system, verify that the TCP/IP hosts
  file is configured properly.

  1.  Open the /etc/hosts file.

      NOTE:   The following is an example:

              127.0.0.1 localhost.localdomain localhost matrix

  2.  If the hostname of the system is identified on the line
      with 127.0.0.1, you must create a new host line.

  3.  Remove the hostname from the 127.0.0.1 line.

      NOTE:   The following is an example:

              127.0.0.1 localhost.localdomain localhost

  4.  On a new line, type the IP address of the system.

  5.  Using the Tab key, tab to the second column and enter the
      fully qualified hostname.

  6.  Using the Tab key, tab to the third column and enter the
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nickname for the system.

NOTE: The following is an example of a completed line:

1.1.1.1 matrix.localdomain matrix

where 1.1.1.1 is the IP address of the server and
matrix is the hostname of the server.

7. Restart the server for the changes to take effect.

4.7 VMware

- After making array configuration changes in VMware, you must
  run the "esxcfg-rescan" tool manually at the VMware console
  to inform the operating system of the new target characteristics
  and/or availability. Alternatively, you can rescan from the
  Virtual Infrastructure Client: click on the host in the left
  panel, select the Configuration tab, choose "Storage Adapters",
  then, on the right of the screen, click "Rescan".

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5. RAID Level-Specific Notes

5.1 RAID 1 and RAID 5 Notes

- During a logical device migration from RAID 1 or RAID 5 to
  RAID 0, if the original logical drive had a spare drive
  attached, the resulting RAID 0 retains the spare drive.

5.2 RAID 10 Notes

- You cannot change the priority of a RAID-10 verify. Setting
  the priority at the start of a verify has no effect. The
  priority is still shown as high. Changing the priority of
  a running verify on a RAID-10 changes the displayed priority
  until a rescan is done, then the priority shows as high again.

- Performing a Verify or Verify/Fix on an RAID 10 displays the
  same message text in the event log, "Build/Verify started on
  second level pool of pool 'Pool_0.'" You may see the message
  three times for a Verify, but only once for a Verify/Fix.

- During a migration from a RAID 0 to any redundant pool, like
  RAID 5 or 10, Adaptec Storage Manager shows the status as
  "Degraded Reconfiguring" for a moment, then the status changes
  to "Reconfiguring." The "Degraded" status does not appear in
  the event log.

5.3 RAID x0 Notes

- After building or verifying a leg of a second-level pool, the
  status of the second-level pool is displayed as a "Quick
  Initialized" pool.

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6. Power Management Issues and Notes

- Windows Power Management offers to control disks through inactivity
  timers maintained by Windows. The resulting Windows disk idle
  commands are accepted as immediate spin-down commands by Adaptec
  Power Management. This short-cuts the timer-based standby->spindown
  mechanism to immediately go to the 'Off' state.

- Though JBOD drives cannot be power-managed by Adaptec Power
  Management, both JBOD drives and logical drives can be power
  managed using Windows. The (default) Storport driver, new to
  Microsoft Windows Server 2003, delivers greater performance
  in hardware RAID and storage area network (SAN) environments
  than the pre-existing SCSIport. However, because Windows will
  not send disk idle commands to Storport drivers, Adaptec
  provides an alternate SCSIport driver to maintain
  compatibility with Windows Power Management. The alternate
  SCSIport drivers are available on the Adaptec Web site
  at www.adaptec.com.

- Power management is not supported for RAID volumes in this
  release. Mixing power-managed RAID arrays and (non-power-managed)
  RAID volumes in a RAID configuration is also not supported.

- Adaptec Storage Manager does not issue a warning if you try to
  delete a logical device with a data partition while the device
  is the off state (powered down); it simply deletes the logical
  device. Normally, Adaptec Storage Manager does not allow you to
  delete a logical device with a data partition.

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7. ARCCONF Notes

- ARCCONF requires the latest drivers to operate properly. Failure
  to update the drivers may result in the console hanging after
  a command is issued.

- With Linux kernel versions 2.4 and 2.6, the ARCCONF
  DELETE <logical_drive> command may fail with a Kernel Oops
  error message. Even though the drives are removed from the
  Adaptec Storage Manager GUI, they may not really be deleted.
  Reboot the controller; then, issue the ARCCONF DELETE command
  again.

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8. Other Issues and Notes

- Adaptec Storage Manager may fail to exit properly when you create
  64 logical devices in the wizard. The exitting problem does not
  prevent the logical devices from being created.

- When clearing a disk drive, do not try to include it in a
  new logical device. Doing so may have unpredictable results.