adaptec by PMC

Adaptec RAID Controller Command Line Utility

User's Guide

Adaptec by PMC Product Support

If you have questions about installing or using your Adaptec by PMC product, check this document first—you will find answers to most of your questions. If you need further assistance, use the support options listed below. To expedite your service, have your computer in front of you.

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- Before contacting Technical Support, you need your product unique TSID number. The TSID number identifies your product and support status.
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- It's recommended that you register your product so that you have easy access to your TSID when contacting product support.

Note: The phone numbers below are subject to change. Please visit the Support section of www.adaptec.com for the most up to date contact information.

North America

- Visit our Web site at www.adaptec.com.
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Getting Started with the Command Line Utility

1

In this chapter...

This chapter explains how your Adaptec® by PMC™ RAID controllers support the use of the ARCCONF command line utility.

This utility allows you to:

- Create and delete logical drives
- Display and modify configuration settings
- Copy configurations from one computer to another
- Recover from a failed physical device and rebuild an affected logical drive
- Flash new firmware and BIOS onto the controller
- Enable the controller to check the removal and connection of any disk drives
- Automatically update Windows drivers
- Provides access to the status and event logs of a controller
- Isolate problems and determine their causes

Installing the Command Line Utility

The ARCCONF command line utility is provided on the Adaptec RAID Controller Installation DVD. The utility is automatically installed in the same directory as Adaptec Storage Manager and must remain there.

Installing on Windows

To install ARCCONF on Windows systems:

1. Start the computer.
2. After Windows starts, insert the Adaptec RAID Controller Installation DVD.

   The Installation DVD Main Menu opens.
3. Select **Install Adaptec Storage Manager**.

   The Installation wizard opens. (If it doesn't open, select **Browse the CD/DVD**, then click **Autorun**.)
4. Follow the on-screen instructions to complete the installation.

Installing on Red Hat, SuSE, or Fedora Linux

To install ARCCONF on Red Hat, SuSE, or Fedora Linux:

1. Start the computer.
2. After Linux starts, insert the Adaptec RAID Controller Installation DVD.
3. Mount the Adaptec RAID Controller Installation DVD:

   Red Hat: `mount /dev/cdrom /mnt/cdrom`

   SuSE: `mount /dev/cdrom /media/cdrom`

   Fedora: `mount /dev/hdc /mnt/cdrom`
4. Change to the Linux manager directory:

   Red Hat/Fedora: `cd /mnt/cdrom/ASMCD/linux/manager`

   SuSE: `cd /media/cdrom/ASMCD/linux/manager`
5. Extract the RPM package and install it:

   `rpm --install ./StorMan*.rpm`
6. Unmount the RAID Controller Installation DVD:

   Red Hat/Fedora: `umount /mnt/cdrom`

   SuSE: `umount /media/cdrom`

Installing on Debian or Ubuntu Linux

To install ARCCONF on Debian or Ubuntu Linux:

1. Insert the Adaptec RAID Controller Installation DVD.
2. Mount the Adaptec RAID Controller Installation DVD:

   `mount /dev/cdrom /mnt/cdrom`

3 Change to the Debian manager directory:

```
cd /mnt/cdrom/ASMCD/debian_x86_64/manager
```

4 Install the .deb package:

```
dpkg -i storman_6.50-15653_amd64.deb (for 64-bit systems)
```

5 Unmount the RAID Controller Installation DVD:

```
umount /mnt/cdrom
```

Installing on OpenServer and UnixWare

To install ARCCONF on OpenServer and UnixWare systems:

1 Insert the Adaptec RAID Controller Installation DVD.

2 Mount the Adaptec RAID Controller Installation DVD:

```
mount -r -F cdfs /dev/cdrom/cdromdevicefile /mnt
```

where *cdromdevicefile* is the device file, for example, c0b0t010, for a DVD-ROM block device. To determine the actual filename, look in the /dev/cdrom directory.

3 Use pkgadd to install Adaptec Storage Manager:

```
pkgadd -d /mnt/ASMCD/unixware/manager/RaidMan.ds (for UnixWare)
pkgadd -d /mnt/ASMCD/openserv6/manager/RaidMan.ds (for OpenServer 6)
```

4 Follow the instructions on the screen to complete the installation.

5 Unmount the RAID Controller Installation DVD:

```
umount /mnt
```

Installing on Solaris

To install ARCCONF on Solaris systems:

1 Insert the Adaptec RAID Controller Installation DVD.

The DVD mounts automatically. (If it doesn't, manually mount the DVD using a command similar to the one shown below. Refer to your operating system documentation for detailed instructions.)

```
mount -F hsfs -o ro/dev/dsk/c1t0d0s2/mnt
```

2 Install Adaptec Storage Manager:

```
pkgadd -d/<mount point>/ASMCD/solaris_x86/manager/StorMan.pkg
```

3 Follow the on-screen instructions to complete the installation.

4 Eject or unmount the RAID Controller Installation DVD. Refer to your operating system documentation for detailed instructions.

Installing on FreeBSD

To install ARCCONF on FreeBSD systems:

1 Insert the Adaptec RAID Controller Installation DVD.

2 Mount the Adaptec RAID Controller Installation DVD:

```
mount /cdrom /mnt
```

Note: Your DVD-ROM drive may have a different device name or path.

3 Install Adaptec Storage Manager:

For FreeBSD for x86 (32-bit):

```
pkg_add /<mount point>/ASMCD/freebsd7/manager/StorMan-x86.pkg.tbz
```

For FreeBSD for amd64 (64-bit):

```
pkg_add /<mount point>/ASMCD/freebsd7_x86_64/manager/StorMan-amd64.pkg.tbz
```

where `mount point` is the DVD-ROM mount point.

Note: The distribution also includes packages for FreeBSD 8.

4 Follow the on-screen instructions to complete the installation.

5 Unmount the RAID Controller Installation DVD. Refer to your operating system documentation for detailed instructions.

Installing on VMware

Note: Use the following procedure to install ARCCONF on VMware ESX Server or vSphere.

To install ARCCONF on VMware systems:

1 Insert the Adaptec RAID Controller Installation DVD.

2 Mount the Adaptec RAID Controller Installation DVD:

```
mount -r /dev/cdrom /mnt/cdrom
```

3 Change to the Linux manager directory:

```
cd /mnt/cdrom/ASMCD/linux/manager (32-bit)
cd /mnt/cdrom/ASMCD/linux_64/manager (64-bit)
```

4 Extract the Linux Adaptec Storage Manager RPM package and install it:

```
rpm --install --nodeps ./StorMan*.rpm
```

Note: Ignore the message "Application can be started by typing /usr/StorMan/StorMan.sh". VMware does not support the Adaptec Storage Manager GUI.

5 Change to the /usr/StorMan directory, then enter this command:

```
chmod +x arcconf
```

6 Unmount the RAID Controller Installation DVD. Refer to your operating system documentation for detailed instructions.

Starting the Command Line Utility

To start ARCCONF, enter one of the following commands:

- Windows—`<install_dir>\arcconf.exe`
- Linux—`/usr/<install_dir>/arcconf`
- UnixWare/OpenServer—`/opt/RaidMan/arcconf`
- Solaris—`/usr/StorMan/arcconf`
- FreeBSD—`/<install_dir>/arcconf`
- VMware—`/usr/StorMan/arcconf`

  Install_dir is the directory where the utility is installed.

To see a list of available commands, type `ARCCONF` at the prompt. The utility command functions are detailed in the next chapter, *Using the Command Line Utility*.

Using the Command Line Utility 2

In this chapter...

This chapter explains how to use the command line utility interactively or in batch mode. With interactive mode, enter commands at the prompt. In batch mode, create scripts and run the script in the appropriate shell. For example:

Environment	Batch File	Run Script
Windows	.bat	CMD.EXE
Linux/Unix	.sh	sh / bash

In either mode, if your command fails, you immediately see an error message of Command failed. Other script messages that you can get are Command completed successfully, or Command aborted.

The return values for each command are the same:

```
0x00: SUCCESS

0x01: FAILURE - The requested command failed

0x02: ABORT - The command was aborted because parameters failed validation

0x03: INVALID_ARGUMENTS - The arguments are incorrect. (Displays COMMAND help)
```

Available commands are described on the following pages, in alphabetical order. To access a list of commands, type `ARCCONF` and press **Enter**.

To access the online help for a specific command, type `ARCCONF` <*command*>, then press **Enter**.

ARCCONF Commands

Perform the following functions from the command line:

ARCCONF COMMANDS			
atapassword	getsmartstats	resetstatisticscounters	setncq
copyback	getstatus	romupdate	setperform
create	getversion	saveconfig	setpower
datascrub	identify	savesupportarchive	setpriority
delete	imageupdate	setalarm	setstate
driverupdate	key	setcache	setstatsdatacollection
failover	modify	setconfig	task
getconfig	playconfig	setmaxiqcache	
getlogs	rescan	setname	

Note: In the online command syntax, <> indicates a required parameter and [] indicates an optional parameter.

arcconf atapassword

Sets or clears the Secure Erase password for SATA drives. See *arcconf task* on page 30 for more information about Secure Erase.

Syntax

```
ARCCONF ATAPASSWORD <Controller#> SET <new password> <Channel# ID#> ...
ARCCONF ATAPASSWORD <Controller#> CLEAR <current password> <Channel# ID#> ...
```

Parameters

new password|current password is the case-senstive password string.

Channel/ID lists the space-delimited channel number and device number (ID) pairs for each drive on which to set or clear the password.

Examples

```
ARCCONF ATAPASSWORD 1 SET uR8ryx 0 1
```

```
ARCCONF ATAPASSWORD 1 CLEAR uR8ryx 0 1
```

arcconf copyback

Enables or disables the copyback feature, which attempts to keep drives in the original slot order after rebuilds.

Syntax

```
ARCCONF COPYBACK <Controller#> <ON|OFF>
```

Parameters

Controller# is the controller number

On enables the copyback feature

Off disables the copyback feature

Example

```
ARCCONF COPYBACK 1 ON
```

arcconf create

Creates a new logical drive or JBOD. You must provide the channel and device ID of the physical devices.

On redundant logical drives, ARCCONF performs autosynchronization.

ARCCONF presents JBODs as physical devices, not logical drives.

Syntax

```
ARCCONF CREATE <Controller#> LOGICALDRIVE [Options] <Size> <RAID#> <CHANNEL#
DRIVE#> [CHANNEL# DRIVE#] ... [noprompt]
ARCCONF CREATE <Controller#> LOGICALDRIVE RVOLUME <LD#> <LD#> [LD#] ... [noprompt]
ARCCONF CREATE <Controller#> JBOD <CHANNEL# DRIVE#> [CHANNEL# DRIVE#] ...
[noprompt]
```

Parameters

Controller# is the controller number

Logical Drive indicates the logical drive stripe size with the following options:

- Stripesize <STRIPE>—Allows the logical drive stripe size to be built. Optional parameters for specifying a stripe size. STRIPE is specified in kilobytes 16, 32, 64, 128, 256, 512 and 1024 are supported. The default is 256KB.
- Legs <LEG>—Optional parameters for specifying number of legs. Value is an integer.
- LEG—Number of legs for RAID level 50 or 60.
  - RAID 50—2-16 legs, 3-32 drives/leg, 128 drives max.
  - RAID 60—2-16 legs, 4-16 drives/leg, 128 drives max.
- Name <NAME>—Optional parameter for specifying the alias name of a logical device that is displayed in the utilities. Value is a string of up to 16 characters.
- Priority <PRIORITY>—Initialization Priority for logical drive to be created. Valid options are: HIGH, MED, or LOW.
- Method <METHOD>—Initialization method for the logical drive. Valid options include: BUILD, CLEAR, QUICK, SKIP.
- Rcache—The parameter to set the logical drive read cache.
  - RON - read cache on
  - ROFF - read cache off
- Wcache—The parameter to set the logical drive write cache.
  - WT - write-through disabled
  - WB - write-back enabled
  - WBB - write-back enabled (when protected by a battery)
- MaxIQcache—The parameter to set the logical drive MaxIQ cache.
  - ION - MaxIQ cache on
  - IOFF - MaxIQ cache off

Size indicates the size of the logical drive in megabytes. Use MAX to set size to available space.

RAID# indicates the RAID level for the new logical drive. 0, 1, 1E, 10, 5, 5EE, 50, 6, 60, and volume are supported.

Channel# Drive# lists the space-delimited channel number and device number pairs for each device to add to the logical drive.

Rvolume is the RAID level for a RAID volume logical drive.

LD# is the logical drive numbers for two or more logical drives to be concatenated into the RAID volume.

Noprompt: No prompt for confirmation

Examples

```
ARCCONF CREATE 1 LOGICALDRIVE STRIPESIZE 64 MAX 0 1 0 2 0 3 2 NOPROMPT

ARCCONF CREATE 1 JBOD 0 1 NOPROMPT
```

arcconf datascrub

Toggles the background consistency check modes of the controller.

Syntax

```
ARCCONF DATASCRUB <Controller#> <on|off|period <DAYS>> [noprompt]
```

Parameters

Controller# is the controller number.

On turns background consistency check on.

Off turns background consistency check off.

Period <DAYS> sets the number of days to complete the background consistency check. The minimum value is 10 days (quick), the maximum is 365 days (slow). Setting the period automaically turns background consistency check on.

Noprompt is an optional parameter that suppresses the confirmation prompt.

Examples

```
ARCCONF DATASCRUB 1 PERIOD 30

ARCCONF DATASCRUB 1 OFF
```

arcconf delete

Deletes a logical drive or JBOD. All data stored on the logical drive or JBOD will be lost. Spanned drives cannot be deleted with this function.

Syntax

```
ARCCONF DELETE <Controller#> LOGICALDRIVE <LogicalDrive#> <LD#> <LD#> [noprompt]

ARCCONF DELETE <Controller#> JBOD <CHANNEL# DRIVE#> [CHANNEL# DRIVE#] ...
[noprompt]

ARCCONF DELETE <Controller#> LOGICALDRIVE|JBOD ALL [noprompt]
```

Parameters

Controller# is the controller number

LogicalDrive# is the number of the logical drive to be deleted.

LogicalDrive|JBOD ALL deletes all logical drives or JBODs.

Noprompt is an optional parameter that suppresses alert messages.

Examples

```
ARCCONF DELETE 1 LOGICALDRIVE 1 2 3

ARCCONF DELETE 1 JBOD ALL
```

arcconf driverupdate

Updates Windows device drivers. When given a directory name, it will attempt to update a driver to the version found in the given directory.

Note: This command is available only on Windows systems.

Syntax

```
ARCCONF DRIVERUPDATE <DirName>
```

Parameters

Driverupdate <DirName> is the directory path containing the driver that you want to update.

Example

```
ARCCONF DRIVERUPDATE C:\WINDOWSALL
```

arcconf failover

Turns automatic failover on and off.

Syntax

```
ARCCONF FAILOVER <Controller#> <on|off>
```

Parameters

Controller# is the controller number.

On turns the controller failover mode on.

Off turns the controller failover mode off.

Example

```
ARCCONF FAILOVER 1 ON
```

arcconf getconfig

Lists information about the controllers, logical drives, and physical devices. This information can include (but is not limited to) the following items:

- Controller type
- BIOS, boot block, device driver, and firmware versions
- Logical drive status, RAID level and size,
- MaxIQ cache status (enabled/disabled), cache policy (low, medium, high), and read/write balance
- Device type, device ID, presence of PFA, SSD status (SSD or not, part of MaxIQ pool, MaxIQ pool compatibility)

- Physical device state
- Number of Solid State Disks (SSDs) assigned to MaxIQ pool, maximum number of SSDs that can be assigned to MaxIQ pool
- Enclosure information: fan, power supply, and temperature status

Syntax

```
ARCCONF CONFIG <Controller#> [AD|LD [LD#]|PD|AL]
```

Parameters

Controller# is the controller number

AD/LD/PD/AL options:

- AD—Adapter information only
- LD—Logical drive information only
- PD—Physical device information only
- AL—All information (optional)

Example

```
ARCCONF GETCONFIG 1 AD
```

arcconf getlogs

Provides access to controller status and event logs and usage statistics, including:

- DEVICE—A log of device errors that the controller encountered.
- DEAD—A log that records any occurrences of defunct devices.
- EVENT—A log of special events that may have occurred (rebuilds, LDMs, etc.).
- STATS—A log of controller usage statistics.

Syntax

```
ARCCONF GETLOGS <Controller#> <Type> [clear|tabular]
```

Parameters

Controller# is the controller number.

Type is one of the following:

- DEVICE
- DEAD
- EVENT
- STATS

Clear clears the specified log.

Note: This option is valid only for the DEVICE, DEAD, and EVENT log types.

Tabular displays the log or statistics in tabular format.

Examples

```
ARCCONF GETLOGS 1 DEVICE
```

```
ARCCONF GETLOGS 1 STATS Tabular
```

arcconf getsmartstats

Displays SMART statistics for the hard drives and Solid State Drives (SSDs) on a controller.

Note: For more information about SMART statistics, see the *Adaptec Storage Manager User's Guide*.

Syntax

```
ARCCONF GETSMARTSTATS <Controller#> [Tabular]
```

Parameters

Controller# is the controller number.

Tabular creates output in tabular format.

Examples

```
ARCCONF GETSMARTSTATS 1
ARCCONF GETSMARTSTATS 1 TABULAR
```

arcconf getstatus

The GETSTATUS function displays the status of any background command that is currently running. Including information about the most recent rebuild, synchronization, logical-drive migration, and compaction/expansion. The information includes the type of operation, status, logical drive number, logical drive size, and percentage of the operation completed.

Note:

1. GETSTATUS reports currently active operations for both ARCCONF commands and commands issued from the Adaptec Storage Manager.
2. GETSTATUS reports verify, clear, initialize, and secure erase operations on physical devices.
3. GETSTATUS only reports active operations. It does not display information if the operation is completed.

Syntax

```
ARCCONF GETSTATUS <Controller#>
```

Parameters

Controller# is the controller number

Example

```
ARCCONF GETSTATUS 1
```

arcconf getversion

Lists version information for all controllers or a specific controller's software components, including information about the BIOS, driver, firmware currently running, and firmware that will run after a reboot.

Note: The firmware version that will run after a reboot is called the "staged" firmware.

Syntax

```
ARCCONF GETVERSION (use this for information on all controllers)
ARCCONF GETVERSION <Controller#> (use this for information on a specific controller)
```

Parameters

Controller# is the controller number

Example

```
ARCCONF GETVERSION
```

arcconf identify

Identifies a physical or logical device by blinking its LEDs.

Syntax

```
ARCCONF IDENTIFY <Controller#> LOGICALDRIVE <LogicalDrive#>
ARCCONF IDENTIFY <Controller#> DEVICE <Channel#> <ID>
```

Parameters

Controller# is the controller number

LogicalDrive# is the number of the logical drive to be identified

Channel# is the channel number for the device to be identified

Device# is the device number for the device to be identified

Examples

```
ARCCONF IDENTIFY 1 DEVICE 0 0
ARCCONF IDENTIFY 1 ALL
```

arcconf imageupdate

Allows new firmware to be flashed to the hard drive.

Syntax

```
ARCCONF IMAGEUPDATE <Controller#> DEVICE <Channel# ID# ChunkSize# Filename> [Mode#] [noprompt]
```

Parameters

Controller# is the controller number

Channel# is the channel number of the device to be updated

ID# is the device number of the device to be updated

ChunkSize# is the chunk size, in bytes, to be used to update the firmware

Note: For SATA drives, the chunk size must be a multiple of 512.

Filename is the name of the firmware update file

Mode# is the firmware update mode. Valid values are:

- 3-(SATA) Download with offsets and save image for immediate and future use

- 7-(SAS) Download microcode with offsets, save, and activate

Noprompt is an optional parameter that suppresses alert messages.

Example

```
ARCCONF IMAGEUPDATE 1 DEVICE 0 83 16384 ados.lod 3
```

arcconf key

Loads a feature key onto an Adaptec controller.

Syntax

```
ARCCONF KEY <Controller#> SET <Key#>
```

Parameters

Controller# is the controller number

Key# is the key number provided by Adaptec

Example

```
ARCCONF KEY 1 SET ABCD EFGH IJKL MNOP QRST UVWX
```

arcconf modify

Morphs a logical device from one raid level to another (RAID Level Migration). Expands a logical device from original to one with larger capacity (Online Capacity Expansion). Can be used to make mirrored sets.

Syntax

```
MODIFY <Controller#> FROM <LogicalDrive#>
TO [Options] <Size> <RAID#> <CHANNEL# DRIVE#> [CHANNEL# DRIVE#] [noprompt]
```

Parameters

Controller# is the controller number

From indicates that the logical drive to be modified will follow

LogicalDrive# is the logical drive number

TO indicates that the modifications will follow

Options:

- Stripesize—indicates the stripe size in KB. Options are 16, 32, 64, 128, 256, 512, and 1024. the default is 256KB.
- init_priority—is the priority level of the modification. Options are low, med, and high.
- Legs— is the number of subarrays for a RAID level-50 or RAID level 60 array. Possible values are 2-16 legs and 3-16 drives/leg (to 48 drives maximum).

Size is one of the following values:

- MAX indicates that you want to use all available space on the disk.
- Desired size in MB.

RAID# is the RAID level for the logical drive 0, 1, 5, 5EE, or 10.

Note: The CHANNEL# and DRIVE# parameters is the list of devices that will contain the target modification object. Channel and device_ID are repeatable parameters.

Channel# is the channel number for the device.

Drive# is the device_ID (device number) for the device.

Noprompt is an optional parameter that overrides the user prompt.

Examples

```
ARCCONF MODIFY 1 FROM 2 TO 2048 0 0 123 0 124 0 117
```

arcconf playconfig

Configures a controller using a XML server template file produced by the SAVECONFIG command (see page 24). Use this command to deploy the same controller configuration on multiple servers in your storage space.

Note:

1. The XML server template file (default, saveconfig.xml) is editable. For example, you may need to change the disk drive capacity, logical drive size, or RAID level.
2. Drives from the same vendor with slightly different capacities (147GB vs 150GB, for instance) are considered interchangeable. If the interchange results in a change in logical drive capacity, the drive is scaled, as needed. For example, if the new drives have 4% more capacity due to vendor or model changes, then all logical drives are increased in size by 4%.
3. Be sure to check the log file to verify that the controller was configured successfully. The exit codes, shown below, indicate the success or failure of the operation and if the system needs to be rebooted.

Code	Value	Meaning
SUCCESS	0	Configuration succeeded, no reboot is required.
FAILURE_GENERAL	1	An error occurred and the configuration could not be completed.
SUCCESS_REBOOT	2	Configuration succeeded, but a reboot is required.

Syntax

```
ARCCONF PLAYCONFIG <Input XML File> [LogFile] [FORCE ALL|LOGICALSIZE]
```

Parameters

Input XML File is the pathname of the server template file. The default server template file is available at C:\PMCS\Logs\saveconfig.xml.

LogFile is the pathname of the error log file. By default, the error log is available at C:\PMCS\Logs\playconfig.log.

FORCE forces deployment of the server even if the controller does not support all features, or the drive capacity does not match the configuration in the input XML file. Use FORCE ALL to force deployment of all features; use FORCE LOGICALSIZE to force deployment of just the logical drives.

Example

```
ARCCONF PLAYCONFIG server1_config.xml playconfig.log FORCE ALL
```

arcconf rescan

Enables the controller to check for the removal of any disk drives in the ready state and to check for the connection of any new disk drives to the controller. The command returns when the rescan is complete.

Syntax

```
ARCCONF RESCAN <Controller#>
```

Parameters

Controller# is the controller number

Example

```
ARCCONF RESCAN 1
```

arcconf resetstatisticscounters

Resets statistics counters for a controller. Use this command to clear the counters and create fresh statistics.

Syntax

```
ARCCONF RESETSTATISTICSCOUNTERS <Controller#>
```

Parameters

Controller# is the controller number.

Example

```
ARCCONF RESETSTATISTICSCOUNTERS 1
```

arcconf romupdate

Allows new firmware and BIOS to be flashed to the controller. A reboot is required for the new firmware to take effect.

Note:

1. This function is only supported in Windows and Linux.
2. Be sure to copy the *.UFI update files from the DVD and not from the BIOS/Firmware update diskettes.

Syntax

```
ARCCONF ROMUPDATE <Controller#> <BaseName> [Newversion <build#> [Force]]
[noprompt]
```

Parameters

Controller# is the controller number

BaseName is the name of the ROM image basename or the fully qualified name if you have a set of controller ROM images.

Note: All UFI files must be in the same directory prior to invoking `ARCCONF`. If you are copying UFI files from floppy images, be sure to check all images.

Newversion <build#> specifies the version of the firmware build.

Force is an optional parameter used to force a down-level firmware update.

Noprompt is an optional parameter that suppresses the confirmation prompt.

Examples

```
ARCCONF ROMUPDATE 1 AC2200

ARCCONF ROMUPDATE 1 AC220001.UFI

ARCCONF ROMUPDATE 1 AS483C newversion 12345 force noprompt
```

arcconf saveconfig

Saves the controller configuration to a XML server template file, including the controller type, operational settings, physical drive size, logical drive size, RAID level, and more. Use this file with the PLAYCONFIG command to deploy the same controller configuration to other servers in your storage space; see page 22 for more information.

Note: Be sure to check the log file to verify that the configuration XML file was created successfully. The exit codes, shown below, indicate the success or failure of the operation.

Code	Value	Meaning
SUCCESS	0	Configuration XML generated successfully.
FAILURE_GENERAL	1	An error occurred and the configuration XML could not be generated.

Syntax

```
ARCCONF SAVECONFIG [Input XML File] [LogFile]
```

Parameters

Input XML File is the pathname of the server template file. The default name (if you omit this parameter) is C:\PMCS\Logs\saveconfig.xml.

LogFile is the pathname of the error log file. By default, the error log is available at C:\PMCS\Logs\saveconfig.log.

Example

```
ARCCONF SAVECONFIG server1_config.xml C:\LOGS\SERVER1.LOG
```

arcconf savesupportarchive

Saves configuration and status information to help Adaptec Customer Support diagnose a problem with your system. Saved information includes (but is not limited to) device logs, drive logs, event logs, error logs, controller logs, and SSD SMART statistics. (For more information about SMART statistics, see *arcconf getsmartstats* on page 19.)

The log files are saved in the Support folder in the standard logs directory for your operating system (/var/log for Linux, the ASM install directory on Windows, and so on).

Note: Unlike the Save Support Archive feature in Adaptec Storage Manager, this command does not create a zip (“archive”) file. It simply saves the support files and logs in the Support folder.

Syntax

```
ARCCONF SAVESUPPORTARCHIVE
```

Parameters

None.

Example

```
ARCCONF SAVESUPPORTARCHIVE
```

arcconf setalarm

Sets the state of the controller audible alarm, if present.

Syntax

```
ARCCONF SETALARM <Controller#> <on|off|silence|test>
```

Parameters

Controller# is the controller number

On enables the alarm

Off disables the alarm

Silence quiets the currently sounding alarm

Test triggers the alarm

Examples

```
ARCCONF SETALARM 1 TEST
```

```
ARCCONF SETALARM 1 SILENCE
```

arcconf setcache

Changes a logical drive's cache mode.

Syntax

```
ARCCONF SETCACHE <Controller#> LOGICALDRIVE <LogicalDrive#> <logical mode>
[noprompt]
```

```
ARCCONF SETCACHE <Controller#> DEVICE <Channel> <ID> <physical mode>
```

Parameters

Controller# is the controller number

LogicalDrive# is the number of the logical drive whose cache will be altered

Logical drive cache modes:

- RON - read cache on
- ROFF - read cache off
- WT - write through disabled
- WB - write back enabled
- WBB - write back enabled (when protected by a battery)

Channel/ID lists the space-delimited channel number and device number pairs for each device to add to the logical drive.

Physical device cache modes:

- WT - write through disabled
- WB - write back enabled

Examples

```
ARCCONF SETCACHE LOGICALDRIVE 1 RON
```

```
ARCCONF SETCACHE DEVICE 0 0 WB
```

arcconf setconfig

Resets the controller's configuration. Logical drives are deleted, hard disks are reset to the READY state, and any controller settings are reset to default values.

Syntax

```
ARCCONF SETCONFIG <Controller#> DEFAULT [noprompt]
```

Parameters

Controller# is the controller number

Default restores the controller ‘s default configuration.

Noprompt: No prompt for confirmation.

Example

```
ARCCONF SETCONFIG 1 DEFAULT
```

arcconf setmaxiqcache

Enables/disables MaxIQ caching for a logical drive, adds a Solid State Drive (SSD) to the MaxIQ pool, removes an SSD from the MaxIQ pool, and sets the MaxIQ Read/Write balance and fetch rate.

Note: Before you can enable the MaxIQ cache, you must assign at least one SSD to the MaxIQ pool. Additionally, read caching must also be enabled (see page 25).

Syntax

```
ARCCONF SETMAXIQCACHE <Controller#> ENABLE|DISABLE <LogicalDrive#>
ARCCONF SETMAXIQCACHE <Controller#> ADDTOPOOL|REMOVEFROMPOOL <Channel# Device#>
ARCCONF SETMAXIQCACHE <Controller#> RWBALANCE <Read#> <Write#>
ARCCONF SETMAXIQCACHE <Controller#> FETCHRATE <Rate#>
```

Parameters

Controller# is the controller number

LogicalDrive# is the number of the logical drive

Channel# is the channel number for the SSD

Device# is the device number for the SSD

Read#/Write# is the read/write ratio for invalidating data on the SSD. When the ratio is reached, the page is removed from the cache. Valid values range from 1-10 for each parameter.

Rate# is the cache fetch rate from 1 (low) to 1000 (high). The default is 100.

Examples

```
ARCCONF SETMAXIQCACHE 1 ENABLE 1
ARCCONF SETMAXIQCACHE 1 ADDTOPOOL 0 1
ARCCONF SETMAXIQCACHE 1 REMOVEFROMPOOL 0 1 0 2
ARCCONF SETMAXIQCACHE 1 RWBALANCE 4 1
ARCCONF SETMAXIQCACHE 1 FETCHRATE 200
```

arcconf setname

Renames a logical drive.

Syntax

```
ARCCONF SETNAME <Controller#> LOGICALDRIVE <LogicalDrive#> <New Name>
```

Parameters

Controller# is the controller number

LogicalDrive# is the number of the logical drive to be renamed

New Name is the new name of the logical drive

Example

```
ARCCONF SETNAME 1 LOGICALDRIVE 1 BACKUP_A
```

arcconf setncq

Changes the controller's Native Command Queuing (NCQ) setting to enabled or disabled. This setting affects the SATA disk drives on the controller. It takes effect when the SATA drives are restarted.

Syntax

```
ARCCONF SETNCQ <Controller#> ENABLE|DISABLE
```

Parameters

Controller# is the controller number.

Example

```
ARCCONF SETNCQ 1 ENABLE
```

arcconf setperform

Changes controller settings based on the application.

Syntax

```
ARCCONF SETPERFORM <Controller#> <Performance Mode>
```

Parameters

Controller# is the controller number.

Performance Mode is 1 (DYNAMIC/Default) or 2 (OLTP/Database).

Example

```
ARCCONF SETPERFORM 1 2
```

arcconf setpower

Changes power management settings for disk drives on a controller or logical drive.

Syntax

```
ARCCONF SETPOWER <Controller#> Stayawake DISABLE|<starttime> <endtime>
```

```
ARCCONF SETPOWER <Controller#> Spinup <internal#> <external#>
```

```
ARCCONF SETPOWER <Controller#> LD <LogicalDrive#> DISABLE|[SLOWDOWN <st#>]
[POWEROFF <pt#>] [VERIFY <vt#>]
```

Parameters

Controller# is the controller number.

Stayawake sets the stayawake period for the disk drives on the controller. During the stayawake period, the disk drives always operate at their peak spin rate.

Disable is a keyword that disables the stayawake period for the disk drives on a controller.

starttime specifies the beginning of the stayawake period, in the form HHMM (24-hour format).

endtime specifies the end of the stayawake period, in the form HHMM (24-hour format).

Spinup sets the spin-up limits for the controller—the maximum number of drives that the controller may spin up at one time.

internal# is the maximum number of internal drives that the controller may spin up at one time, from 0-20.

external# is the maximum number of external drives (such as the drives in a JBOD) that the controller may spin up at one time, from 0-20.

LogicalDrive# is the logical drive number.

Slowdown st# sets the disk drive slow-down timer, in minutes. Valid values are 0 (never), 3, 5, 10, 20, 30, 60, 120, 180.

Poweroff pt# sets the disk drive power-off timer, in minutes. Valid values are 0 (never), 3, 5, 10, 20, 30, 60, 120, 180.

Verify vt# sets the period of inactivity, in hours, after which an inactive drive (a drive that's already powered down) is restarted to verify its operating condition. Once the check is completed, the drive is powered down and returns to its inactive state. Valid values are 0 (never), 1, 2, 3, 8, 12, 24.

Note: For the Slowdown, Poweroff, and Verify timers, st# must be less than pt#, and pt# must be less than vt#. You can set one or more timers, in any order, in a single command. Keep in mind that the Verify timer, vt#, is specified in hours; the other two timers are specified in minutes.

Examples

```
ARCCONF SETPOWER 1 STAYAWAKE DISABLE

ARCCONF SETPOWER 1 SPINUP 4 4

ARCCONF SETPOWER 1 LD 2 POWEROFF 60

ARCCONF SETPOWER 1 LD 2 SLOWDOWN 20 POWEROFF 60 VERIFY 12
```

arcconf setpriority

Changes a task's execution priority or a controller's global background task priority.

Syntax

```
ARCCONF SETPRIORITY <Controller#> [TASK ID] <New Priority> [current]
```

Parameters

Controller# is the controller number.

Task ID is the number of the task to be changed. Use arcconf getstatus to obtain the task ID. Omit this parameter to set the controller's global background task priority; that is, the execution priority for all tasks on the controller.

New Priority is: LOW, MEDIUM, or HIGH.

Current (keyword) applies a global task priority change to running tasks. By default, a global priority change does not apply to running tasks.

Examples

```
ARCCONF SETPRIORITY 1 <task_id> HIGH
ARCCONF SETPRIORITY 1 LOW CURRENT
```

arcconf setstate

Changes the state of a physical device or logical device from its current state to the designated state.

Syntax

```
ARCCONF SETSTATE <Controller#> DEVICE <Channel#> <Device#> <State> [LOGICALDRIVE
<LD#>[LD#] ... ] [noprompt]
ARCCONF SETSTATE <Controller#> LOGICALDRIVE <LD#> OPTIMAL [ADVANCED <option>]
[noprompt]
```

Parameters

Controller# is the controller number.

Channel# is the channel number for the drive.

Device# is the device number for the device.

LD# is the logical drive number.

State:

- HSP—Create a hot spare from a ready drive
- RDY—Remove a hot spare designation
- DDD—Force a drive offline (to Failed)

ADVANCED <option> is an optional keyword/option pair. Set option to Nocheck to force a logical drive to the Optimal state without performing a consistency check.

Noprompt: No prompt for confirmation.

Examples

```
ARCCONF SETSTATE 1 DEVICE 0 0 HSP LOGICALDRIVE 1 2 3
ARCCONF SETSTATE 1 DEVICE 0 0 RDY LOGICALDRIVE 2
ARCCONF SETSTATE 1 LOGICALDRIVE 1 OPTIMAL ADVANCED nocheck
```

arcconf setstatsdatacollection

Enables or disables statistics collection for a controller. To display the statistics, use the *arcconf getlogs* command (see page 18).

Syntax

```
ARCCONF SETSTATSDATACOLLECTION <Controller#> Enable|Disable
```

Parameters

Controller# is the controller number.

Enable turns statistics collection on.

Disable turns statistics collection off.

Example

```
ARCCONF SETSTATSDATACOLLECTION 1 ENABLE
```

arcconf task

Performs a task on a logical drive or a physical drive.

Syntax

```
ARCCONF TASK
TASK START <Controller#> LOGICALDRIVE <LogicalDrive#> <options> [noprompt]
TASK STOP  <Controller#> LOGICALDRIVE <LogicalDrive#>
TASK START <Controller#> DEVICE <Channel> <ID> <options> [noprompt]
TASK STOP  <Controller#> DEVICE <Channel> <ID>
```

Parameters

Controller# is the controller number

LogicalDrive# is the number of the logical drive in which the task is to be performed

- Logical drive options:
  - verify_fix (Verify with fix)—verifies the logical drive redundancy and repairs the drive if bad data is found.
  - verify—verifies the logical drive redundancy without repairing bad data.
  - clear—removes all data from the drive.
- Physical device options:
  - verify_fix—verifies the disk media and repairs the disk if bad data is found.
  - verify—verifies the disk media without repairing bad data.
  - clear—removes all data from the drive.
  - initialize—returns a drive to the READY state (erases the metadata).
  - secureerase [password]—removes all data from the drive in a secure fashion to prevent any possible recovery of the erased data. See *arcconf atapassword* on page 14 for details about setting the password.

Examples

```
ARCCONF TASK START 1 LOGICALDRIVE 1 VERIFY
ARCCONF TASK START 1 DEVICE 0 0 INITIALIZE
```

PMC-Sierra, Inc.
1380 Bordeaux Drive
Sunnyvale, CA 94089 USA

Part Number: CDP-00262-01-A, Rev A