SUPERO®

LSI MegaRAID Software Configuration Utility for the LSI 1068 Controller

USER'S MANUAL

Revision 1.0

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Preface

About This Manual

This manual is written for system integrators, PC technicians and knowledgeable PC users. It explains how to configure and use the LSI Software RAID Configuration Utility included with Supermicro motherboards.

Manual Organization

Chapter 1 Provides an overview on the LSI™ MegaRAID® Software Utility.

Chapter 2 provides an introduction to the LSI MegaRAID Software Utility settings. It also details instructions on how to run the LSI MegaRAID Configuration Utility.

Conventions Used in the Manual

Special attention should be given to the following symbols for proper installation and to prevent damage done to the components or injury to yourself.

Warning: Important information given to prevent erroneous RAID configuration and to ensure proper system setup.

Note: Additional Information given to ensure correct RAID configuration setup.

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Chapter 1

Introduction

After you have installed hardware components, you must first configure the LSI MegaRAID Software Utility before you install an operating system and other software drivers.

Note: If you do not wish to configure LSI Software RAID settings, please proceed with the OS installation. For OS installation instructions, refer to related documents posted on our web site at www. supermicro.com.

1-1 Introduction to the LSI MegaRAID Software Utility for the LSI 1068 Controller

The LSI Embedded MegaRAID Software Configuration Utility adds RAID functionality to enhance system efficiency and data security by supporting RAID 0, RAID 1, RAID 10 and RAID 5 (via I-Button). RAID 0 (striping) can greatly enhance hard disk I/O performance by striping data across multiple drives. RAID 1 (mirroring) allows data to be simultaneously written to multiple drives, thus increases data integrity. RAID 10, combining RAID 0 and RAID1, provides superb system performance and system security. When used with an I-Button, the LSI MegaRAID Utility also supports RAID 5, which implements block-level striping with parity data distributed across all disks, achieving greater data redundancy at a lower cost. By incorporating the LSI MegaRAID Software configuration into our product design, Supermicro offers the user the benefits of software RAID configuration without the high costs associated with hardware RAID applications.

The LSI Embedded MegaRAID Software Utility supports up to eight SAS or SATA ports, providing an efficient solution for data transfer, storage reliability and security.

Features

The LSI MegaRAID Software supports the following features:

- Support for BIOS Boot Specification (BBS) (if available in the system BIOS)
- Support for Interrupt 13 and Enhanced Disk Drive Specification
- Option ROM size of up to 64 Kb
- Support for Power-On Self Test (POST) and run-time BIOS support for device removal and insertion (Plug & Play)

- Support for Post Memory Management (PMM) Specification v. 1.01
- Support for Stop-On-Error during bootup
- 48-bit LBA support for read, write, and flush cache functions
- Support for drive roaming
- Support for up to 2 Terabyte physical and logical drives

Functions

The following functions are supported by the LSI MegaRAID Software Utility:

- Support for BIOS Boot Specification (BBS) (if available in system BIOS)
- Support for Interrupt 13 and Enhanced Disk Drive Specification
- Support for Enable/Disable BIOS Boot
- Support for Hot-plug and Hot Auto Rebuild (during a hot plug event and the physical drive is forced off-line)
- Support for up to 2 Terabyte logical drives

Drive Features

The following Drive Features are supported by the LSI MegaRAID Software Utility:

- Support for RAID 0, RAID 1, RAID 10 and RAID 5 (via I-Button)
- Online mirror rebuilding
- Online consistency checks
- Array management software
- Error logging and notification
- Automatic resume of rebuilding on restart
- Support for manual rebuilding
- Auto-configuration support of newly-added physical drive

- Support for global hotspare
- Array initialization support
- Logical drive available immediately after creation
- Stripe size of 64 Kb supported

1-2 RAID Modes Supported by the LSI 1068 Controller

SR Mode (Software RAID Mode)

This is the default mode. To use this mode, please do the following:

- Install a Software RAID Mode Driver in the OS.
- Create RAID 0, RAID 1, and RAID 10 via the WebBIOS Utility so that the OS can detect the hard disk drives installed in the system.
- Buy an I-Button (AOC-IButton68) from Supermicro to enable RAID 5 support.


AOC-IButton68

(Please refer to http://www.supermicro.com/products/accessories/addon/AOC-IButton68.cfm for more information on the AOC-Button68.)

IT Mode (Initiator and Target Mode)

This is a Non-RAID mode. To use this mode, be sure to flash an IT mode firmware to the EEPROM and to install an IT Mode driver to the system OS. (See the note below.)

To Activate RAID Modes

You can activate a RAID mode by pressing any key in the BIOS setup.

- Press <CTRL> + <C> to activate the IT mode.
- Press <CTRL> + <M> to activate the SR mode.

Note: Different RAID modes require different firmwares and drivers. Be sure to download the correct RAID mode driver before installing it to the OS. For firmware downloads and assistance, please contact Supermicro Technical Support at www.supermicro.com or Support@supermicro.com.

1-3 RAID Level Review

To create a RAID storage configuration, you will need to configure physical disk drives into arrays first. An array is a group of one ~ eight physical disks that is seen as one large disk drive (logical drive) by the host computer system. Only one RAID level can be assigned to an array.

- A RAID 0 array consists of one ~ eight physical drives.
- A RAID 1 array consists of two physical drives
- A RAID 10 array consists of four, six or eight physical drives.

Warning: Do not use both SAS and SATA drives in the same array to avoid system malfunctioning or decreasing Mean Time Between Failures (MTBF).

RAID 0 (Striping)

RAID 0 provides disk striping across all disk drives in an array. It does not provide data redundancy, but it offers the best RAID performance.

RAID 0 Requires 1~8 Disk Drives	
RAID 0 Example with 2 Disks	
Disk Drive A	**Disk Drive B**
Segment 1	Segment 2
Segment 3	Segment 4
Segment 5	Segment 6
Segment 7	Segment 8

RAID 1 (Mirroring)

RAID 1 creates a duplicate copy of data by copying all data from one drive to another. It provides data redundancy, but it doubles data storage capacity requirement.

RAID 1 Requires a minimum of 2 Disk Drives	
RAID 1 Example with 2 Disks	
Disk Drive A	**Disk Drive B**
Segment 1	Duplicate copy of Segment 1
Segment 2	Duplicate copy of Segment 2
Segment 3	Duplicate copy of Segment 3
Segment 4	Duplicate copy of Segment 4

RAID 10 (Striping + Mirroring)

RAID 10 combines RAID 0 and RAID 1 by first breaking down data into smaller segments and stripping these segments to each RAID1 set. Each RAID 1 set, then duplicates its data to its mirrored drive.

RAID 10 provides the best RAID performance and best data security.

RAID 10 Requires 2, 4 or 6 Disk Drives			
RAID 10 Example with 4 Disk Drives			
Striping: Data Striping Across Drive A & Drive B			
Drive A		**Drive B**	
Segment 1		Segment 2	
Segment 3		Segment 4	
Segment 5		Segment 6	
Segment 7		Segment 8	
Mirroring: Coping Data from Drive A to Drive C		**Mirroring: Copying Data from Drive B to Drive D**	
Drive A	**Drive C**	**Drive B**	**Drive D**
Segment 1	Duplicate Copy of Segment1	Segment 2	Duplicate Copy of Segment2
Segment 3	Duplicate Copy of Segment3	Segment 4	Duplicate Copy of Segment4
Segment 5	Duplicate Copy of Segment5	Segment 6	Duplicate Copy of Segment6
Segment 7	Duplicate Copy of Segment7	Segment 8	Duplicate Copy of Segment8

Notes

Chapter 2

Configuring the LSI MegaRAID Settings for the LSI 1068 Controller

This chapter provides configuration instructions for the LSI Embedded MegaRAID Software Utility. If you do not wish to configure LSI Software RAID settings, please skip this section and go directly to the OS Installation. For OS installation instructions, please refer to our web site at www.supermicro.com.

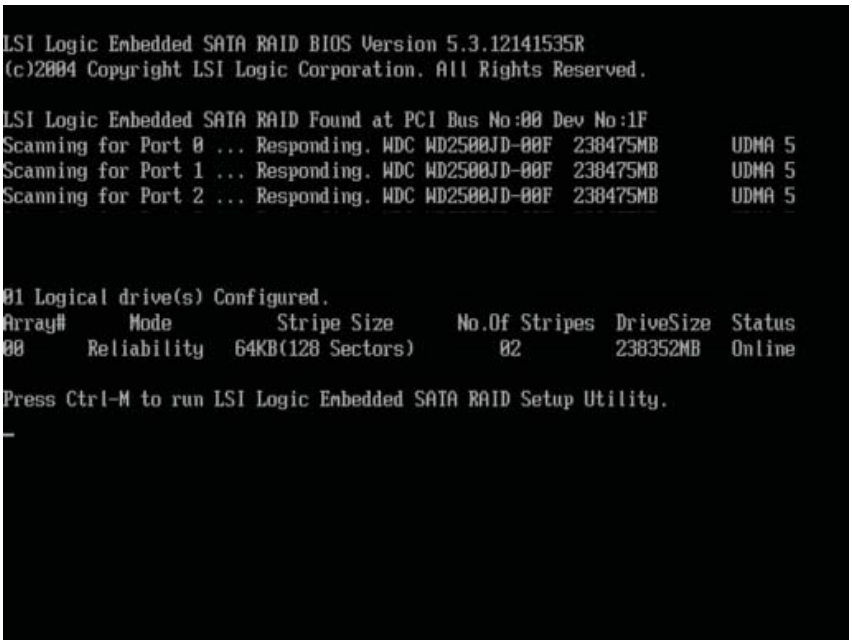
For system stability, please do not use both SAS and SATA drives in the same array.

2-1 Using the LSI MegaRAID Configuration Utility

Follow the steps indicated below to configure arrays and logical drives.

1. Power on the system.

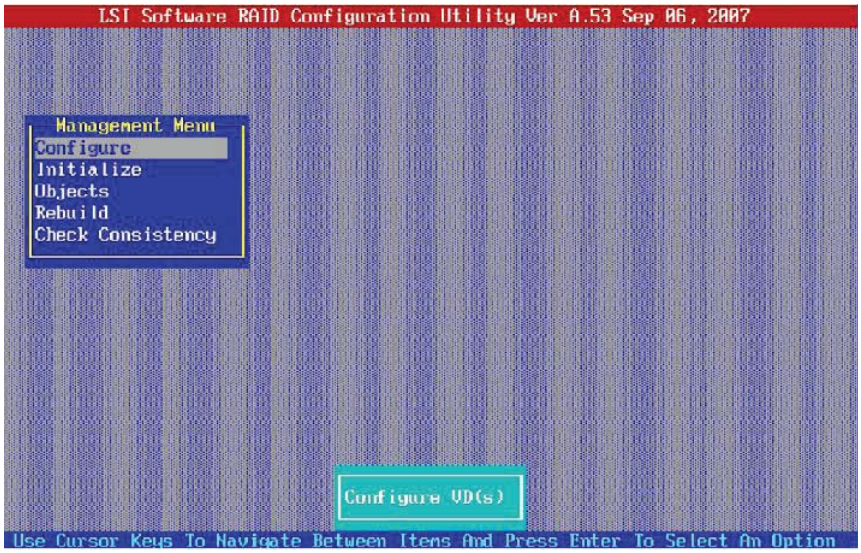
2. When the screen as shown below displays, press <CTRL> and <M> to enter the LSI MegaRAID Configuration Utility.



3. Once you are in the LSI MegaRAID Software Configuration Utility, the LSI MegaRAID Main screen as shown on the next page will appear.

2-2 The LSI MegaRAID Utility Main Menu

When entering the LSI MegaRAID Utility, the following LSI MegaRAID Main Screen appears:



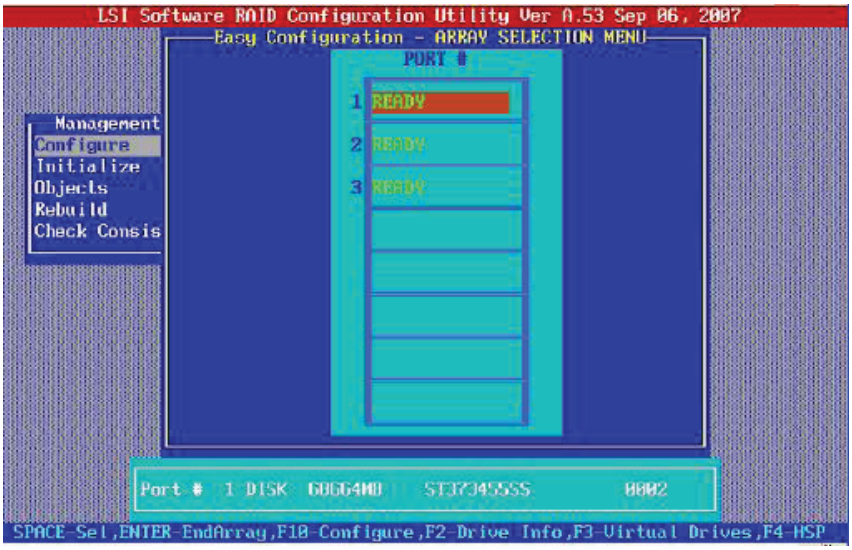
The LSI MegaRAID Main Menu includes the following five submenus: Configuration, Initialization, Objects, Rebuild, and Check Consistency. These submenus allow the user to configure arrays and logical drives as desired.

2-3 Using Easy Configuration Settings to Configure Arrays and Virtual Drives

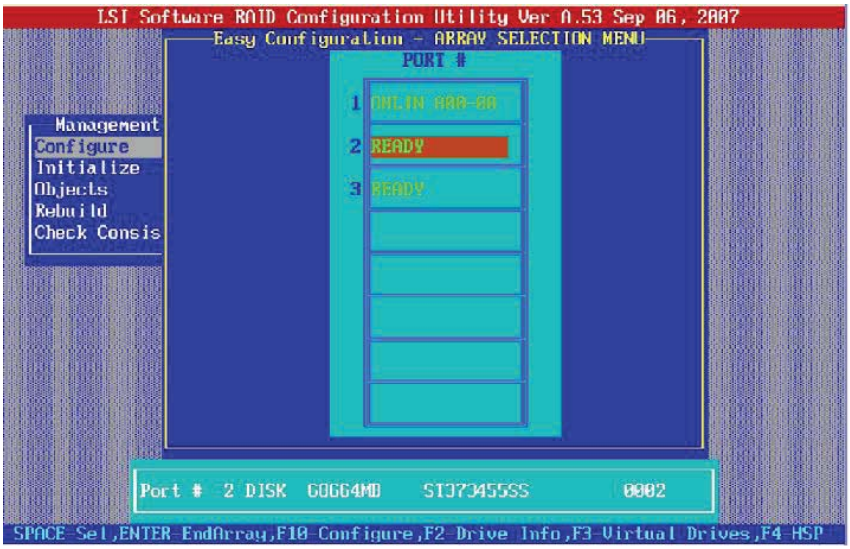
Easy Configuration Settings allow you to check the properties of or assign an array to a disk drive of your choice. You can also use these settings to configure a disk drive as a virtual drive or a hotspare.

1. When the LSI MegaRAID Main Menu as shown above displays, use the arrow keys to select Configure and press <Enter>.

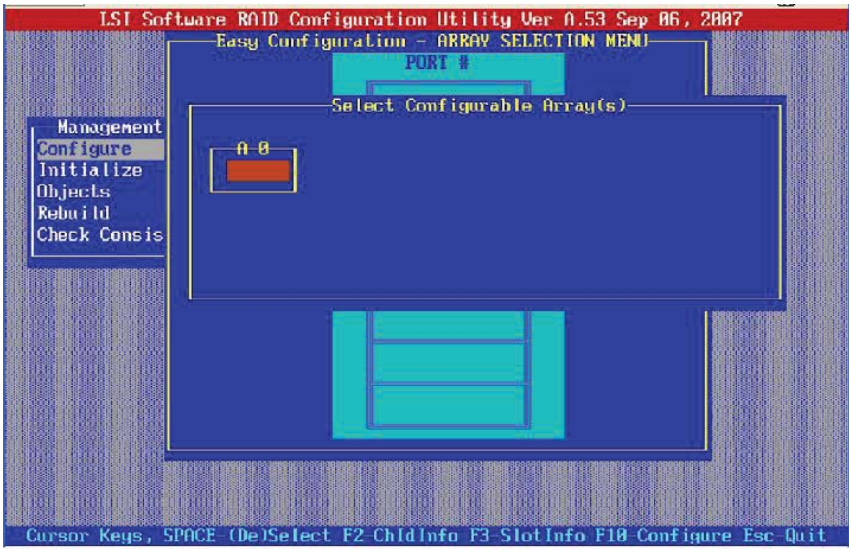
2. Use the up/down arrow keys to select Easy Configuration and press <Enter> to view the physical drives in the system.



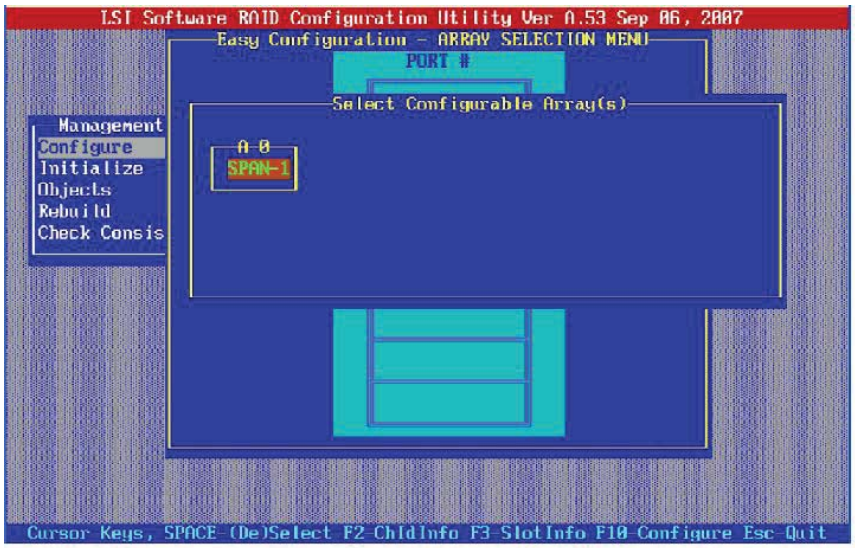
3. The physical drives that are ready for configuration will be displayed. Press <Spacebar> to select the drive you wish to configure the RAID settings.



4. When the physical drive you wish to assign an array to is selected, press <F10> to configure the array.



5. When the screen as shown above displays, press <Spacebar> to select the array setting (number).



6. Once the right array number appears, press <F10> to configure it.

7. Use the Up/Down Arrow keys to highlight Select RAID.

8. In the pop-up dialogue box, using the Up/Down Arrow keys, select Accept and press <Enter>.

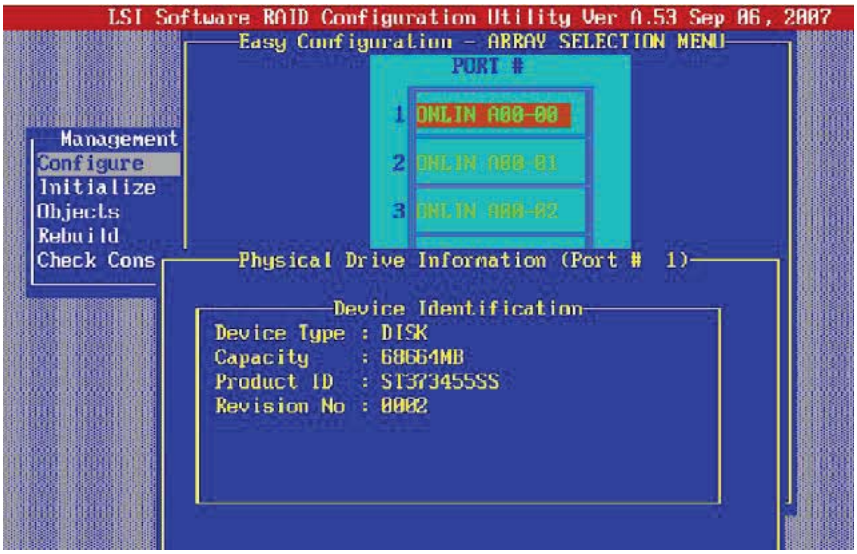
9. When a message prompt appears, select Yes to configure the array.

To Display Drive Information

1. From the LSI MegaRAID main menu, select Configuration and press <Enter>.

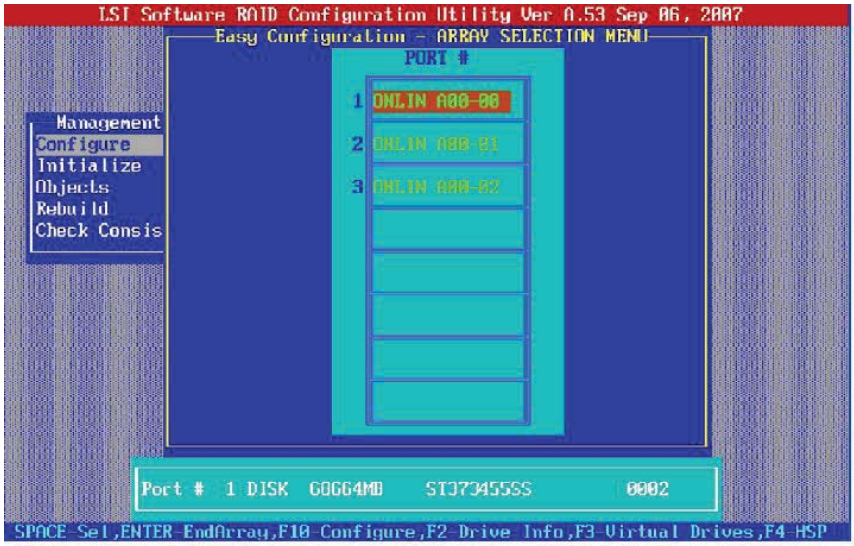
2. Use the arrow keys to select Easy Configuration and press <Enter> to view the drives available in the system. Press <Spacebar> to select the disk drive you wish to configure.

3. When the disk drive is selected, press <F2> to display the disk drive information as shown below.



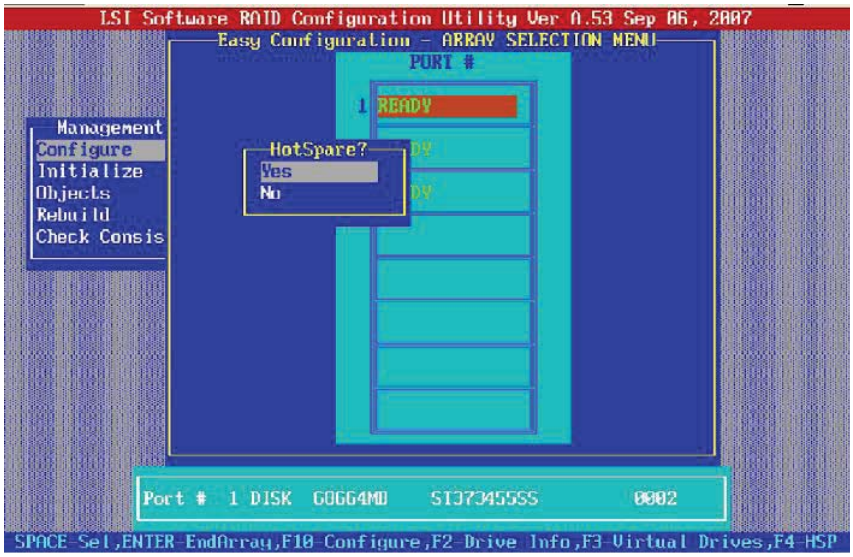
To Configure a Virtual Drive

4. You can also configure a selected physical drive as a virtual drive by using the up/down arrow keys to select the drive and press <F3>.

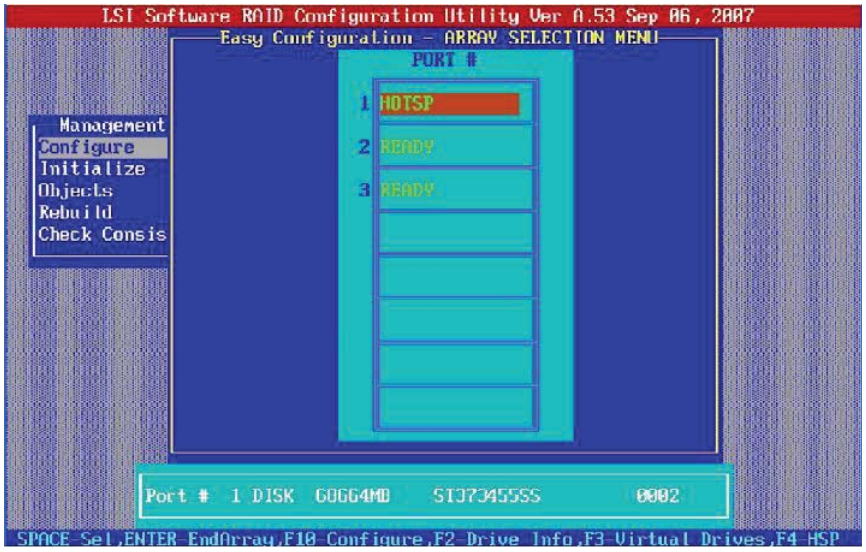


Using Easy Configuration to Configure a Hotspare Drive

5. To configure the selected drive as a hotspare drive, press <F4>. The following screen appears:



6. When prompted to confirm whether you want to configure Hotspare, select Yes and press <Enter>. The drive selected will be configured as Hotspare as shown in the screen below.



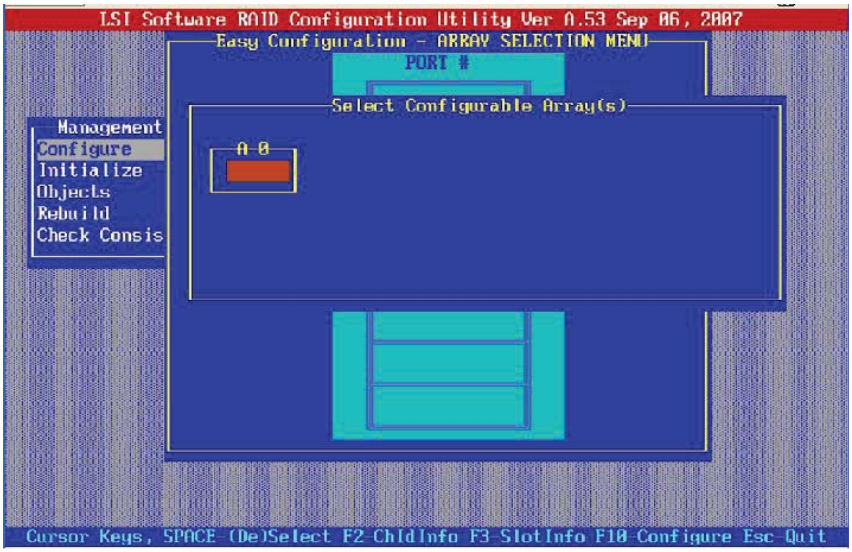
Using Easy Configuration to Assign an Array

1. Select Configure from the LSI MegaRAID Main screen.

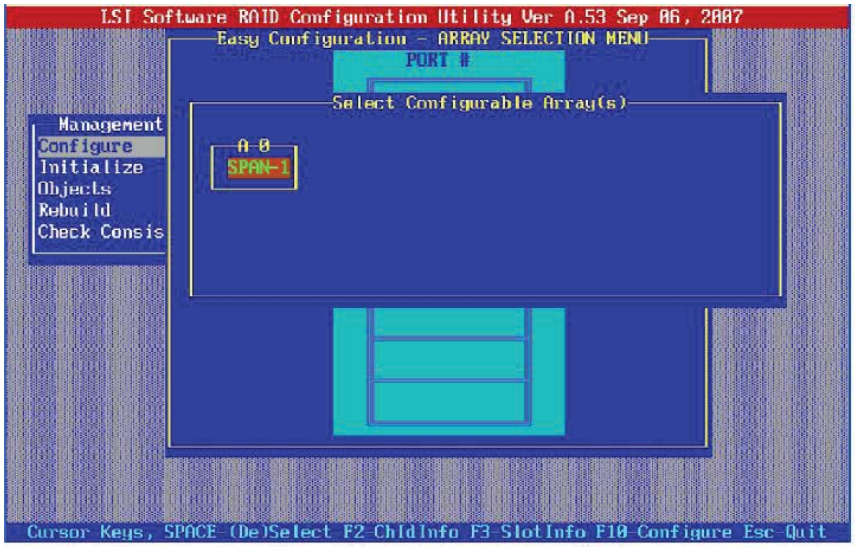
2. Select Easy Configuration from the Configuration menu and press <Enter>.

3. When the screen showing the available disk drives displays, use the up/down arrow keys to select the drive you want to assign an array to.

4. When the drive you wish to assign an array to is highlighted as shown above, press <F10> to configure the array. A screen as shown below will appear:



5. When the screen above displays, press <Spacebar> to select the Array number.



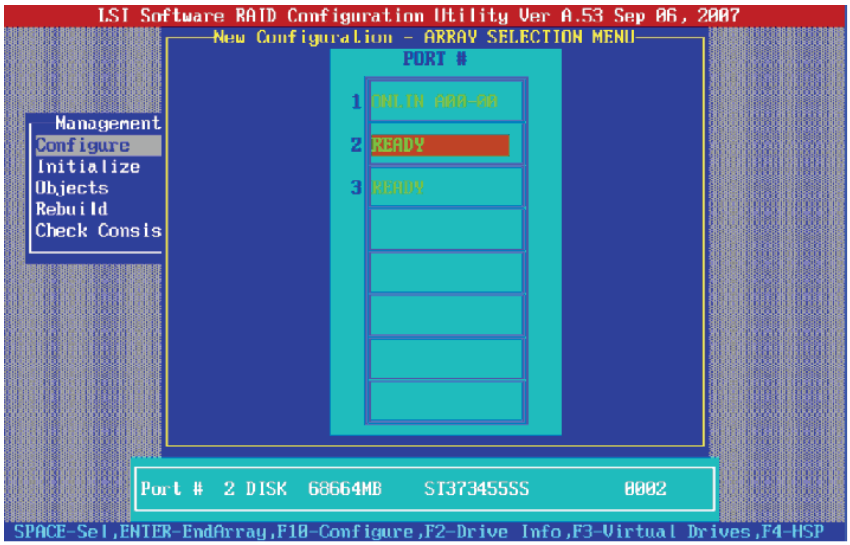
6. Once the right Array number appears, press <F10> to configure it.

2-4 Using New Configuration Settings to Configure a Selected Disk Drive

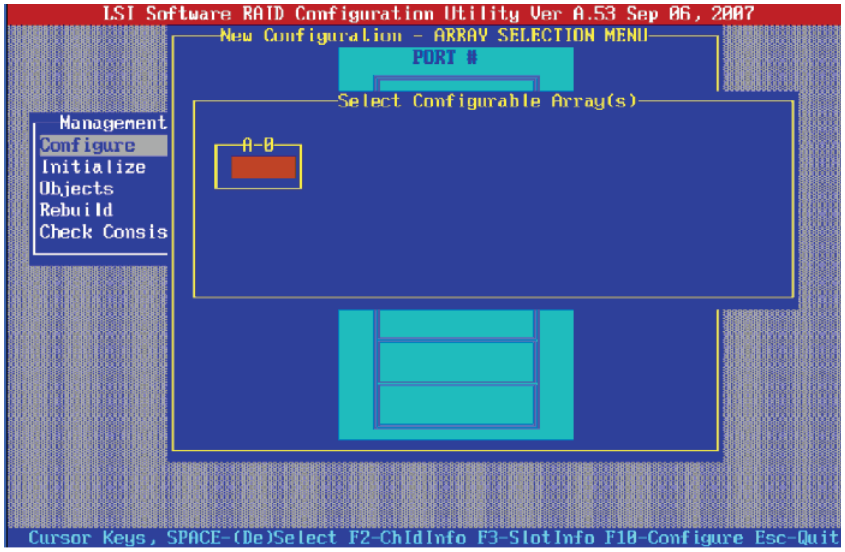
New Configuration Settings allow the user to configure a selected disk drive. Be careful when using this feature because it will erase existing RAID settings and reconfigure new settings for a disk drive selected. To configure a disk drive, follow the steps below:

1. Select Configure from the LSI MegaRAID Main menu and press <Enter> to use the New Configuration settings.

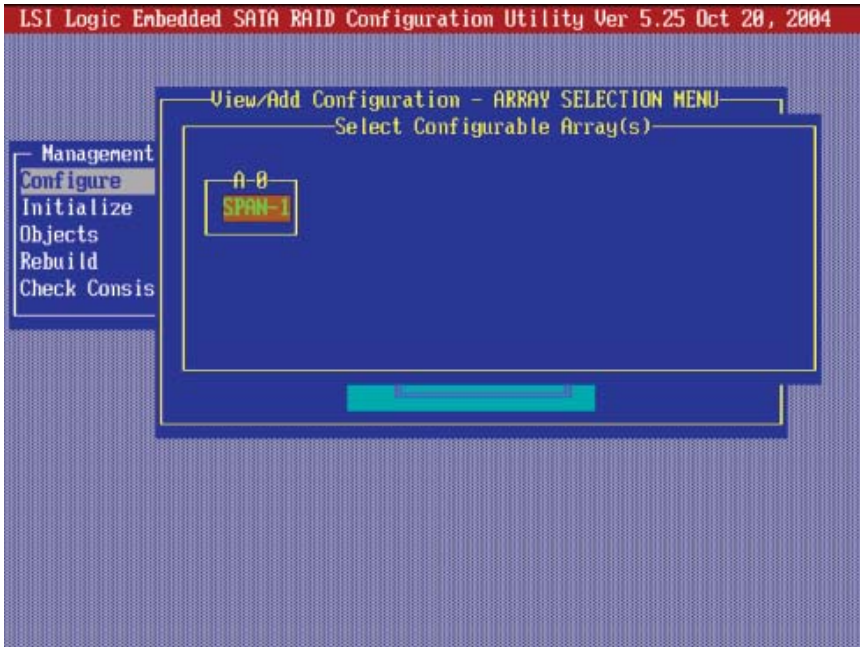
2. When a screen showing all drives that are available in the system appears, press <Spacebar> to select the drive you wish to configure the RAID setting.



3. After selecting the drive, press <F10> to configure it. The following screen will display.



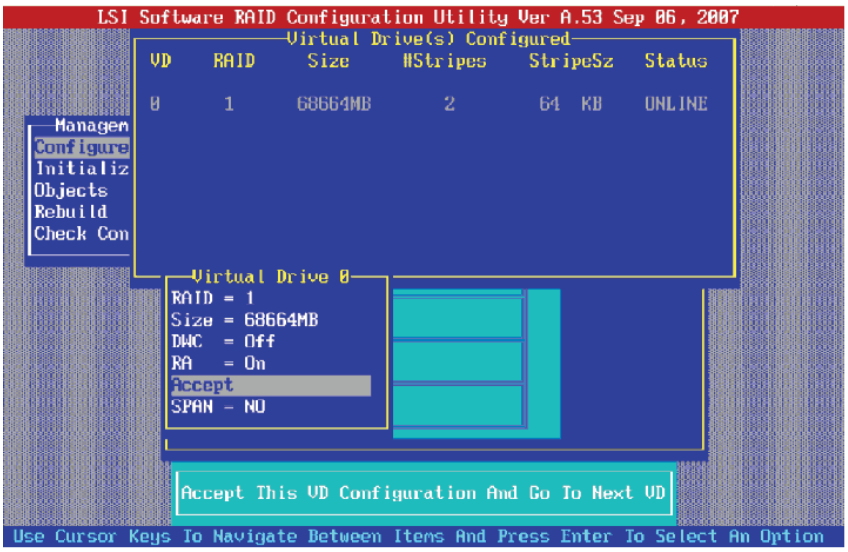
4. When the array settings: A0 (:Array 0) and A1 (Array 1) appear, using the arrow keys, select the correct Array setting and press <Enter>.



5. Press <F10> to configure the array.

6. Use the arrow keys to select the correct RAID level and press <Enter>.

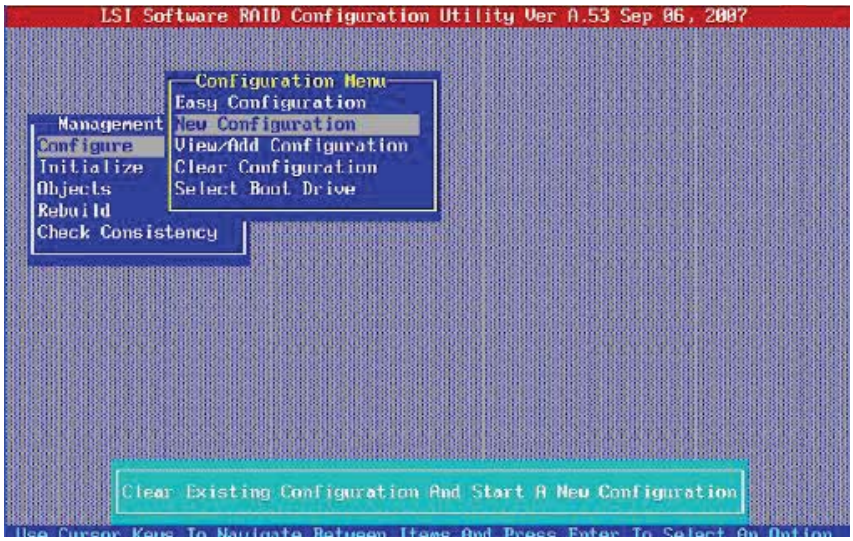
7. When the dialogue box as shown on the bottom appears, using the arrow keys, highlight Accept and press <Enter> to configure the drive.



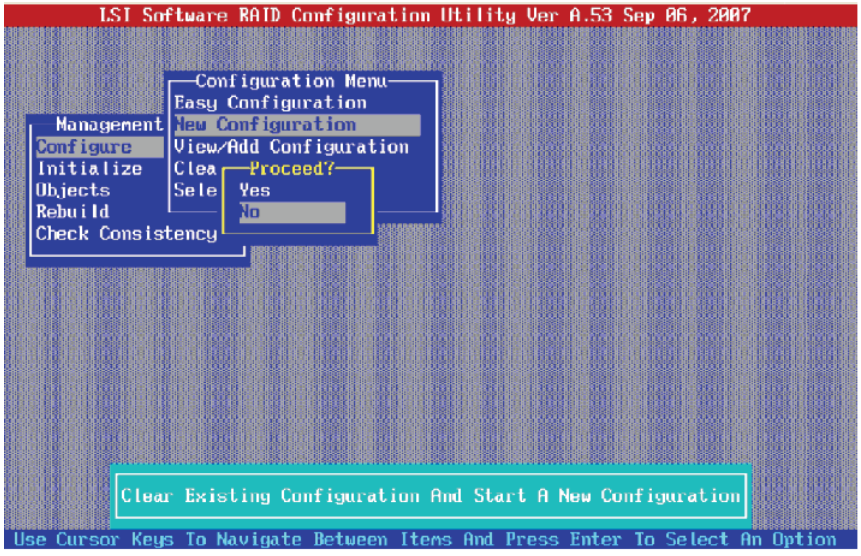
2-5 Using New Configuration Settings to Configure a Hotspare Drive

New Configuration Settings allow the user to clear an existing configuration of a selected drive or to configure a new RAID setting for this drive.

1. Select Configure from the LSI MegaRAID Main menu and press <Enter> to use the New Configuration settings.

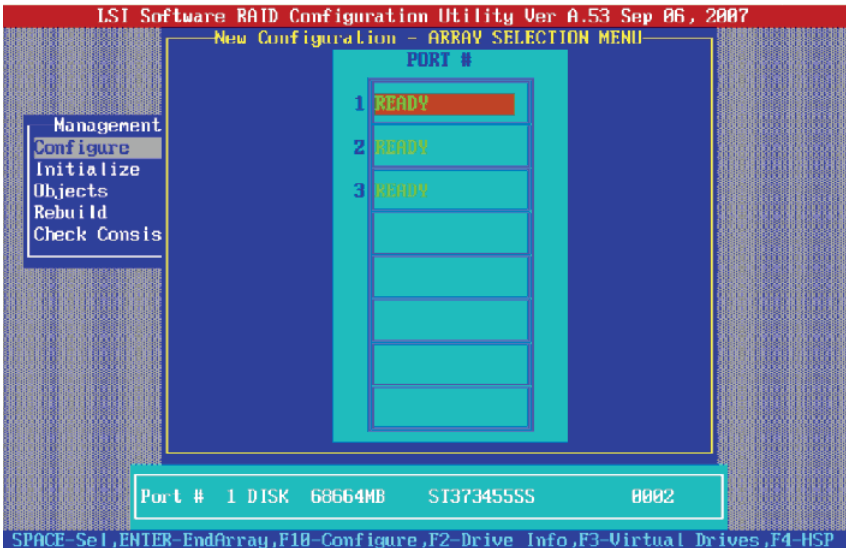


2. From the Configuration Menu, select New Configuration and press <Enter>. The following screen will appear:



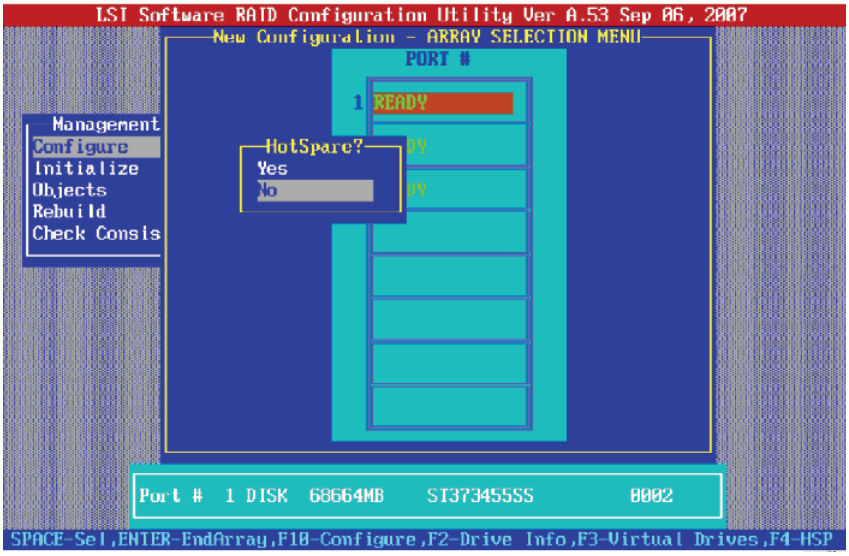
3. When prompted to confirm whether you want to proceed with this selection, use the arrow keys to select Yes or No and press <Enter>. The disk drives that are available for configuration will appear as shown below:

Warning: Please be careful when using this feature. It will erase existing RAID settings and reconfigure new settings for disk drives selected.

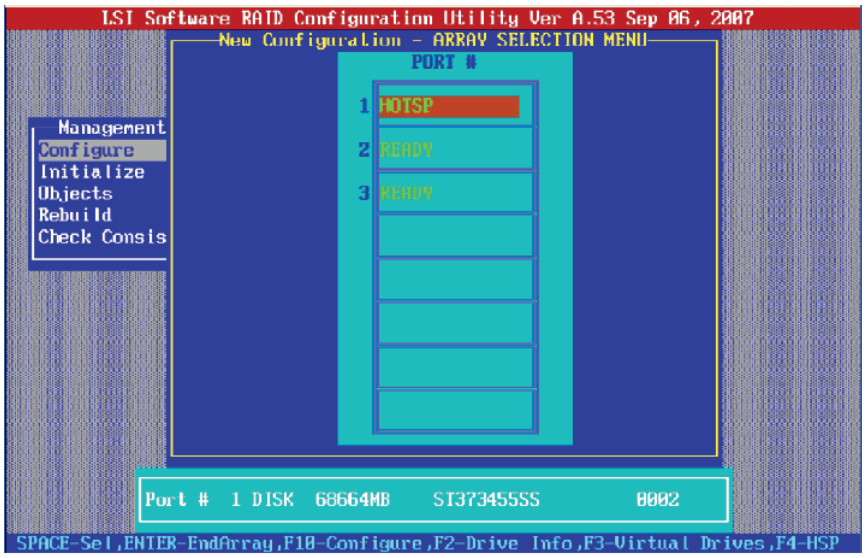


4. Use the up/down arrow keys to select the disk drive which you wish to configure a new RAID setting with as shown above.

5. When the drive you wish to configure as a hotspare drive is selected, press <F4> and <Enter>. The following screen will display:



6. When prompted to confirm whether you wish to configure a hotspare drive, select Yes and press <Enter>. A screen will display showing the selected drive that has been configured as a hotspare drive as shown below:

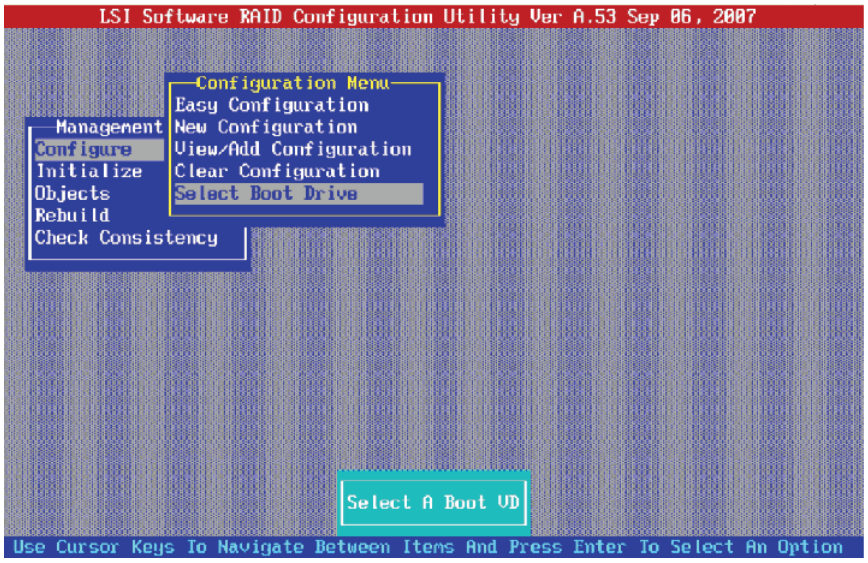


2-6 Selecting a Boot Drive

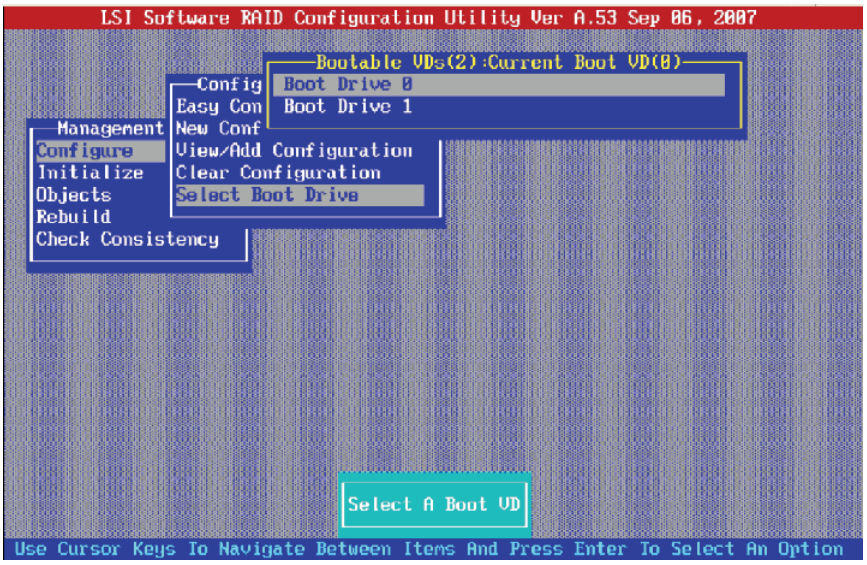
To select a disk drive as a boot drive, following the steps below.

1. From the LSI MegaRAID Main menu, select Configuration and press <Enter>.

2. When Configuration Menu appears, use the down arrow key to select Select Boot Drive as shown below.



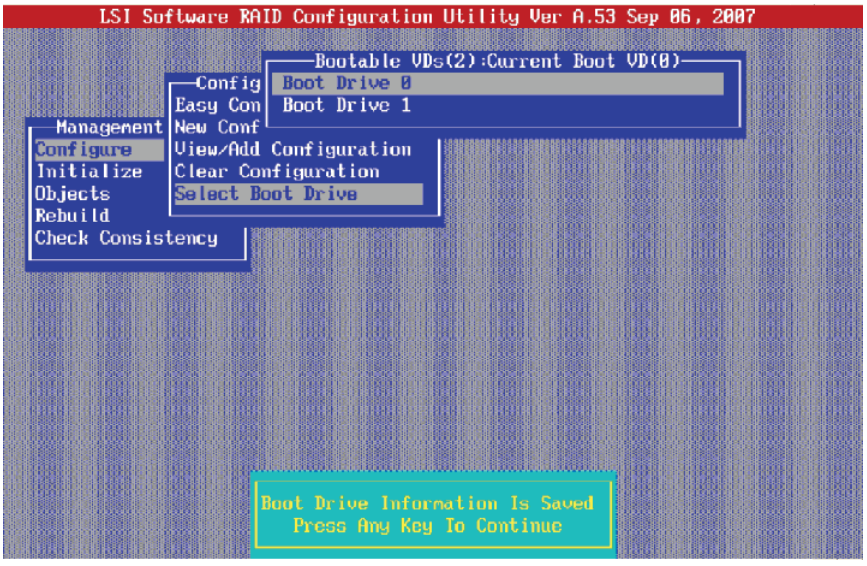
3. When the screen as shown above appears, press <Enter>, and the available boot devices will display as shown below.



4. Use the up/down arrow keys to select the disk drive you wish to configure as Boot Drive 0 and press <Enter>.

5. Repeat the step above to select your Boot Drive 1 as you wish.

When you have completed Boot Drive Selection, a message will appear, indicating that the Boot Drive information is saved as shown below.

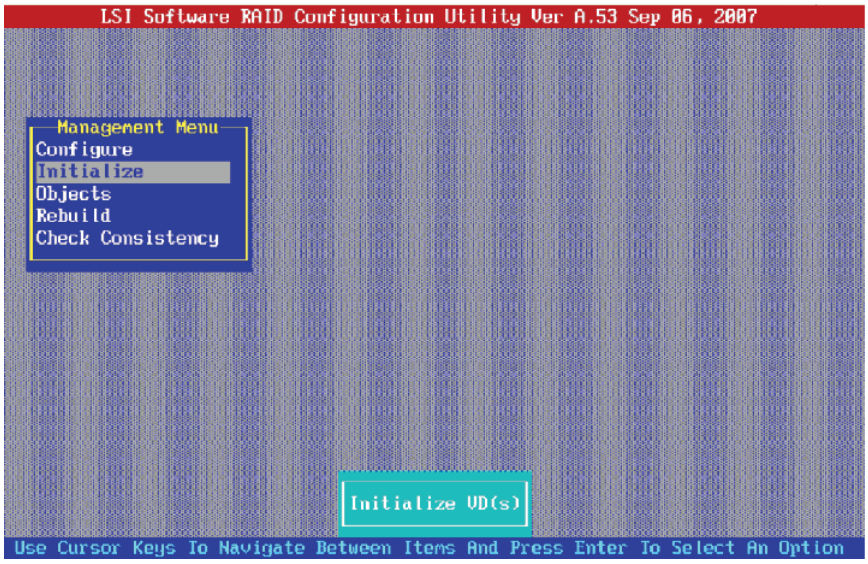


6. Press any key to continue with the RAID setup.

2-7 Initializing a Disk Drive

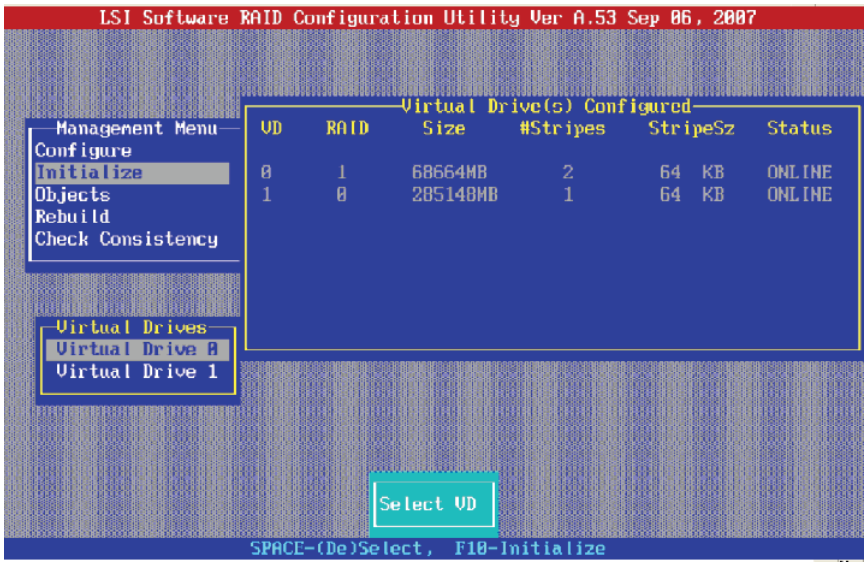
Warning: Please be careful when you initialize a disk because initialization will erase all data stored in the disk, including RAID settings, and reformat the disk.

From the LSI MegaRAID Main menu, select Initialization and press <Enter>.



7. A pop-up dialogue box displays, indicating Initialization of Virtual Drives (VD) as shown in the screen below.

8. To proceed with initialization, press <Enter>. The following screen will display.



9. Use <Spacebar> to select a disk drive to be initialized.

10. Once the drive is selected, press <F10> to initialize the disk drive.

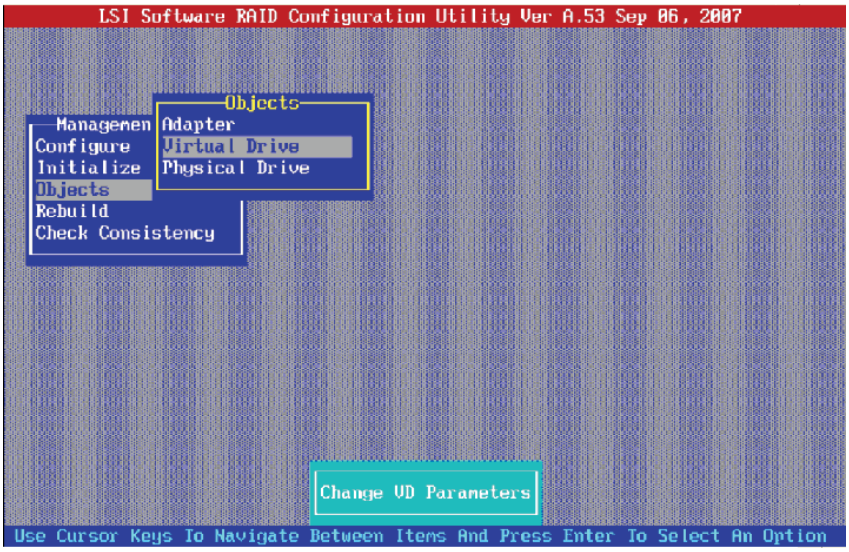
2-8 Using the Objects Menu to Configure Device Settings

The Objects Menu allows the user to configure, initialize, view & update the parameters of a disk drive. This feature also allows you to configure the RAID level and check the consistency of any disk drive. You can use this feature to configure Global Hotspare drives as well.

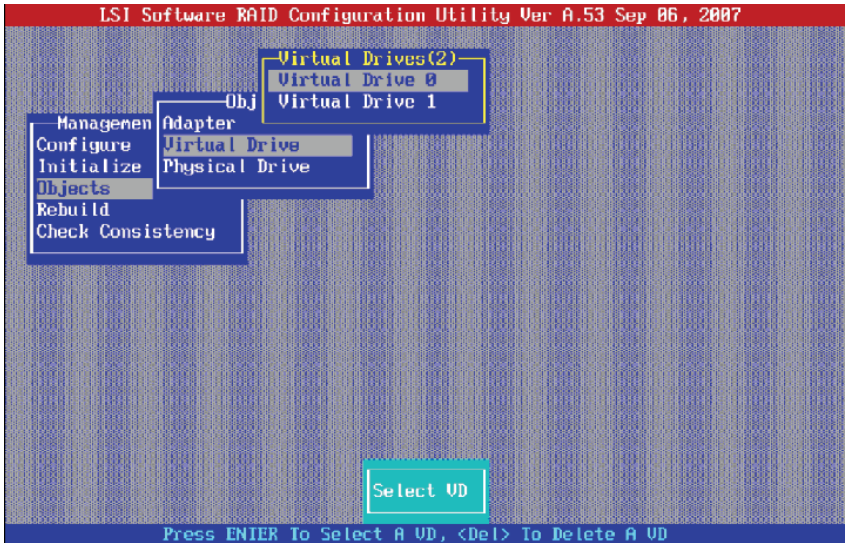
To View and Display Virtual Disk Drives in the System

Follow the steps below to view and display virtual disk drives.

1. From the LSI Main Menu, select Objects and press <Enter>.

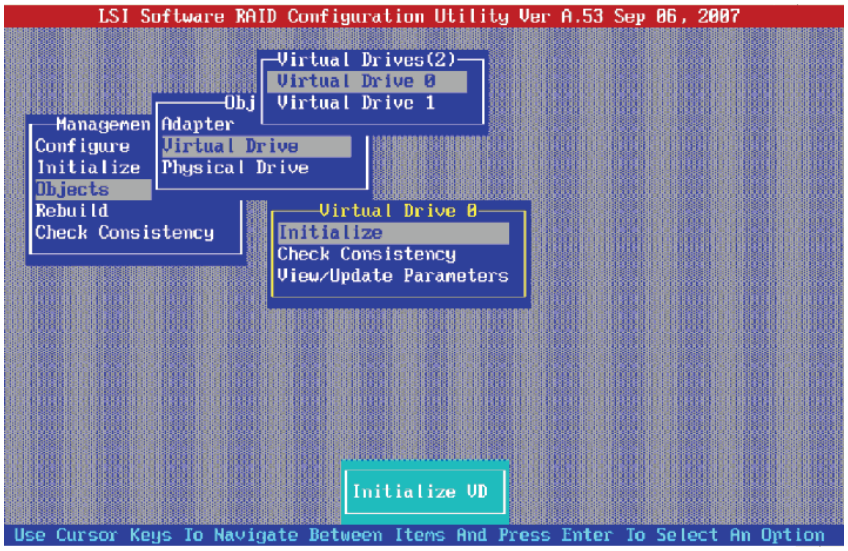


2. From the Objects pop-up submenu, select Virtual Drive and press <Enter> as shown above. The available virtual drives will be displayed as shown below.

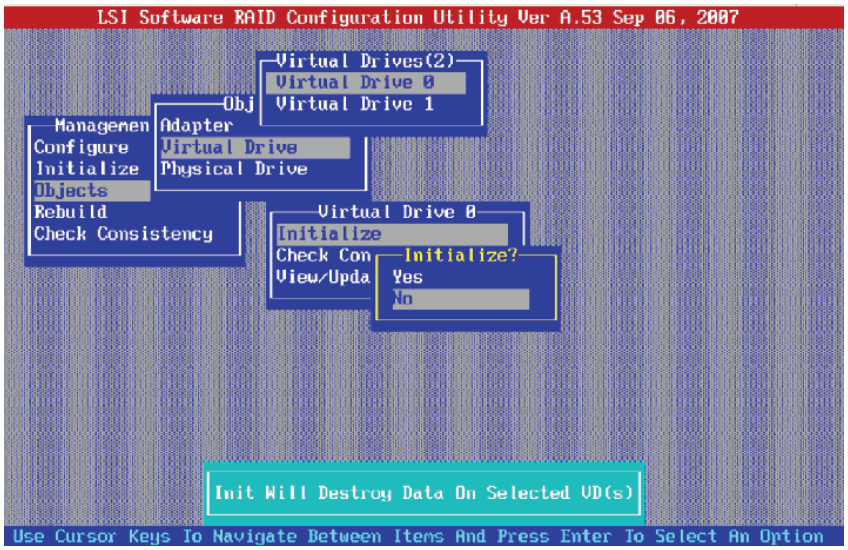


Initializing a Virtual Disk Drive

3. When the available virtual disk drives display as shown above, use the up/down arrow keys to select the virtual drive you wish to initialize and press <Enter>. The following screen will appear:



4. From the Virtual Drive Pop-up submenu as shown above, select Initialize and press <Enter>. A popup dialogue box will appear to confirm whether you wish to initialize the virtual drive selected.



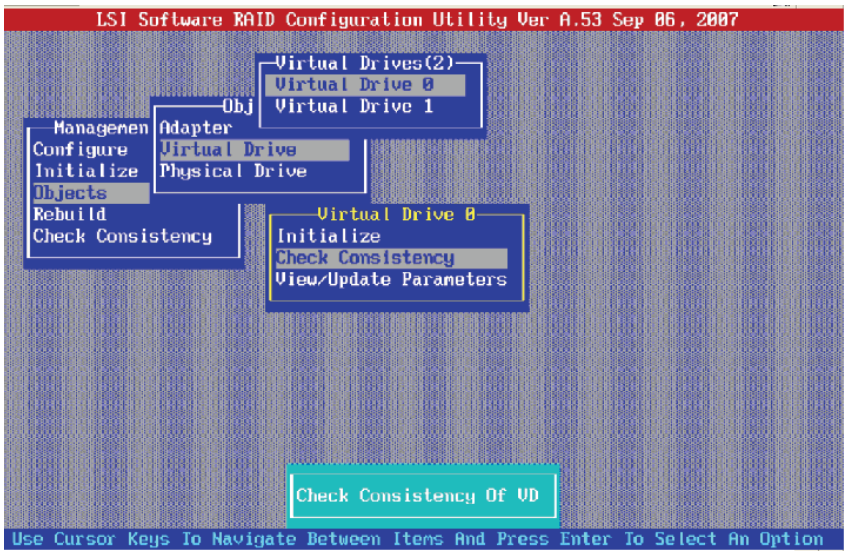
Warning: Please be careful when you initialize a disk because initialization will erase all data stored in the disk, including RAID settings, and reformat the disk.

Use the up/down arrow keys to select No and press <Enter> to cancel the selection. If you want to proceed with initialization, select Yes, and press <Enter>. The virtual disk drive selected will be initialized and reformatted.

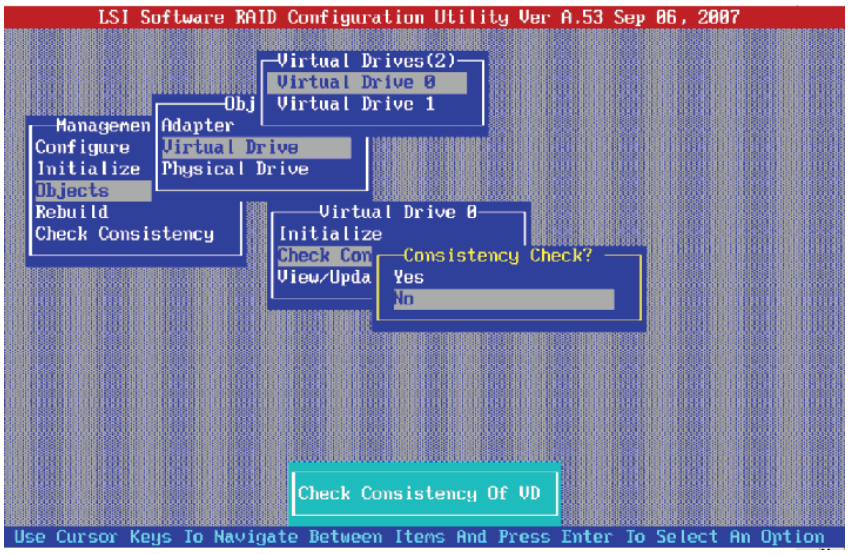
Checking Data Consistency of a Selected Virtual Drive

1. Follow Steps 1~2 on Page 2-15 to display all virtual disk drives in the system.

2. When the screen as shown on the bottom of page 2-15 appears, use the up/down arrow keys to select the disk drive you wish to check consistency with and press <Enter>. The following screen will appear:



3. When the screen shown as above appears, use the up/down arrow keys to select Check Consistency from the virtual drive submenu, and press <Enter>. A popup dialogue box will appear to confirm whether you wish to check consistency for the virtual drive selected.

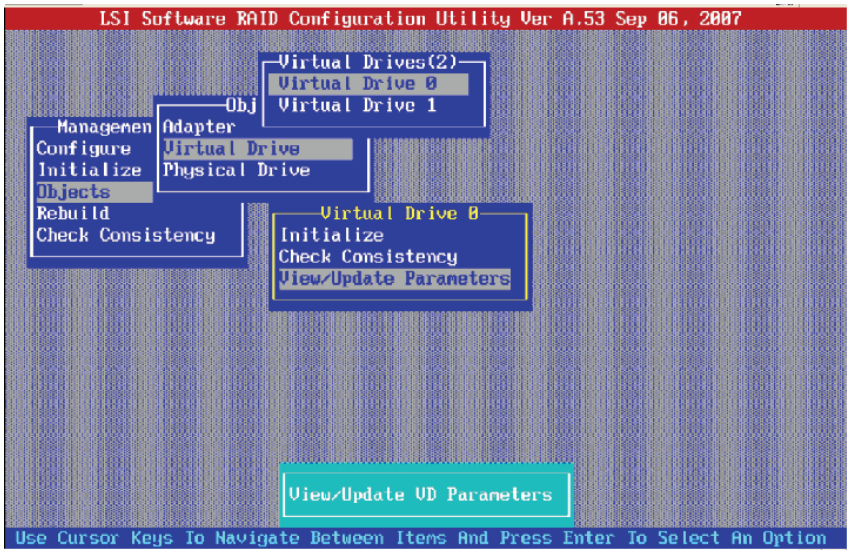


4. Select Yes and press <Enter> to proceed with consistency check. Select No and press <Enter> to cancel the selection.

Viewing and Updating the Parameters (or the Properties) of a Selected Virtual Disk Drive

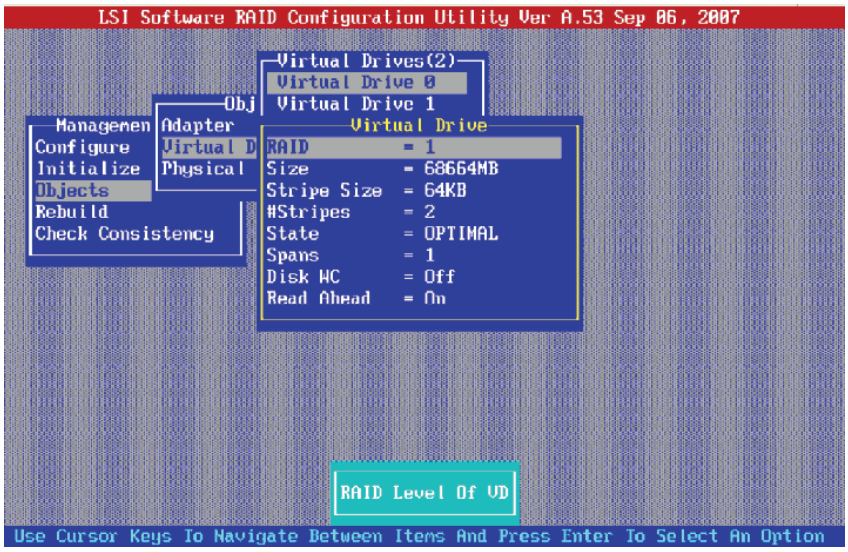
1. Follow Steps 1~2 on Page 2-15 to access all virtual drives available in the system.

2. When the screen shown on the bottom of Page 2-15 appears, use the up/down arrow keys to select the virtual disk whose parameters you wish to view/update, and press <Enter>. The following screen will appear:



Viewing the Parameters of a selected Virtual Drive

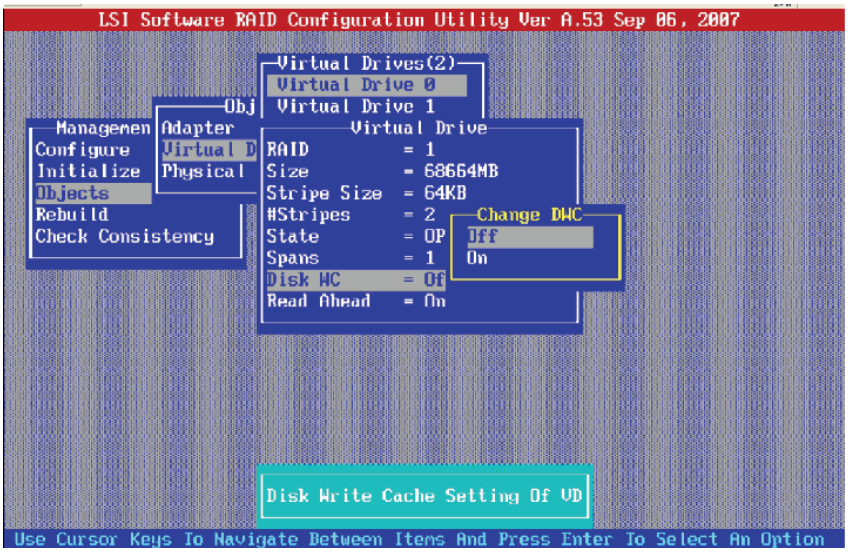
3. When the screen as shown above appears, select View/Update Parameters from the selected virtual drive submenu, and press <Enter>. A screen indicating the parameters and RAID settings of the virtual drive you have selected will appear as shown below:



Updating the Parameters of a Selected Virtual Drive

4. When the parameters of the virtual drive you wish to update appears as shown above, use up/down arrow keys to select the item you wish to update and press <Enter>.

Note: Some items are for display only. The item that allows updates will display a update option submenu as shown below.



Updating the Disk Write-Cache Setting of a Selected Virtual Drive

5. When the parameters of a selected virtual drive appears, use the up/down arrow keys to select Disk WC (Write-Cache) and press <Enter> as shown above.

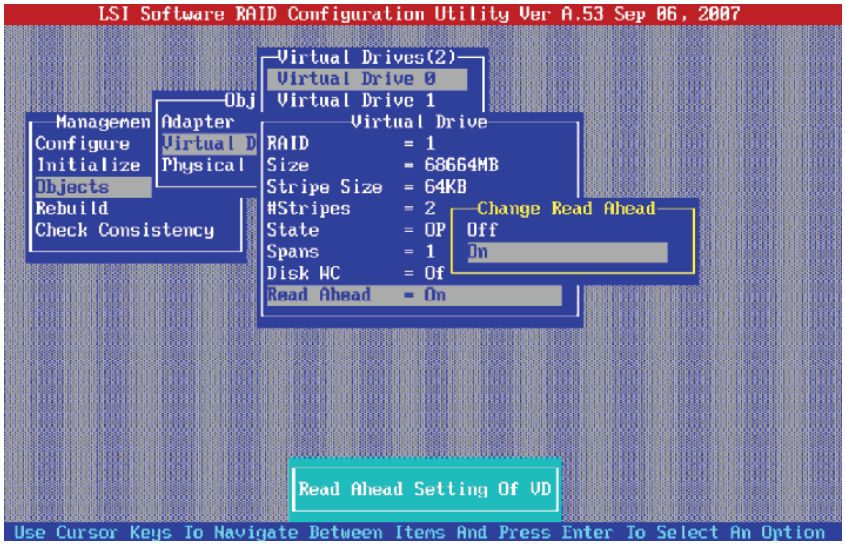
Notes: Any changes to the Disk Write-Cache setting will be applied to all drives in the same array. When the Disk Write-Cache is **On**, a write transaction is considered complete when all data has been written to the disk cache. When Disk Write-Cache is **Off,** the write transaction is considered complete when the data has been written to the disk.

Warning: When Disk Write-Cache is On, data can be lost if a power failure occurs before the cached data is written to the disk.

Updating the Read-Ahead Setting of a Selected Virtual Drive

1. When the parameters of a disk drive appears as shown on the previous page, use the arrow keys to select (Disk) Read-Ahead and press <Enter> as shown above.

Notes: Any changes to the Disk Read-Ahead setting will be applied to all drives in the same array.



Deleting a Virtual Disk Drive

Warning: Before deleting a virtual drive, be sure to back up all the data you intend to keep.

The LSI MegaRAID Software allows you to delete any virtual drive defined in the configuration settings. Following the steps below to delete a specific virtual drive.

1. From the LSI MegaRAID Main Menu, select Objects and press <Enter>.

2. From the Objects submenu, select Virtual Drive and press <Enter>.

3. When the screen with all available Virtual Drives appears, select the virtual drive you wish to delete and press <Delete>.

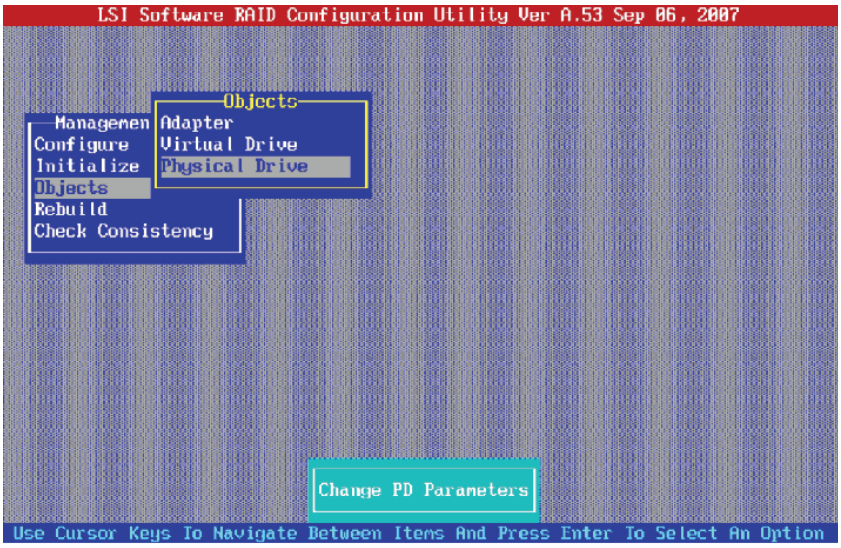
4. When a dialogue box with a confirmation message appears, select No and press <Enter> to cancel the selection. To delete the selected virtual drive, Select Yes and press <Enter>.

Configuring Global Hotspare Drives by Using the Objects Menu

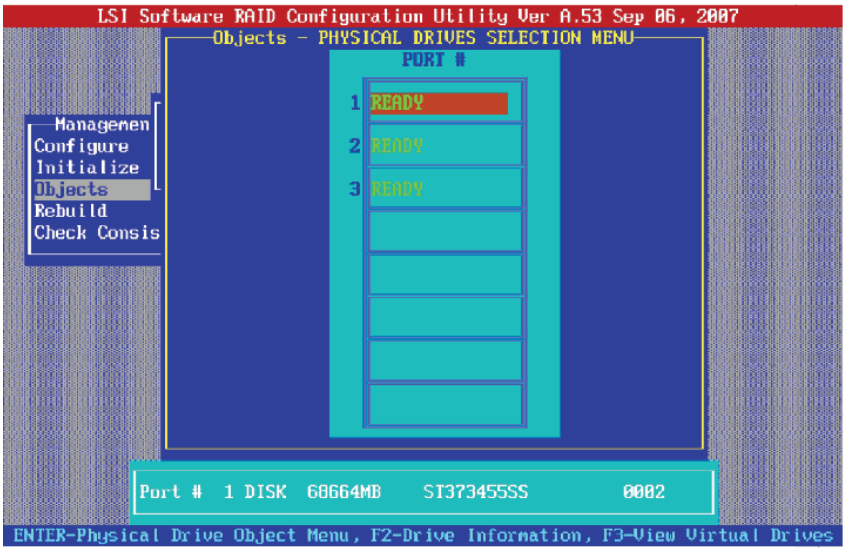
Follow the steps below to configure Global Hotspare drives using the Object Menus.

1. From the LSI Main Menu, select Objects and press <Enter>.

2. From the Objects submenu, select Physical Drive and press <Enter>.

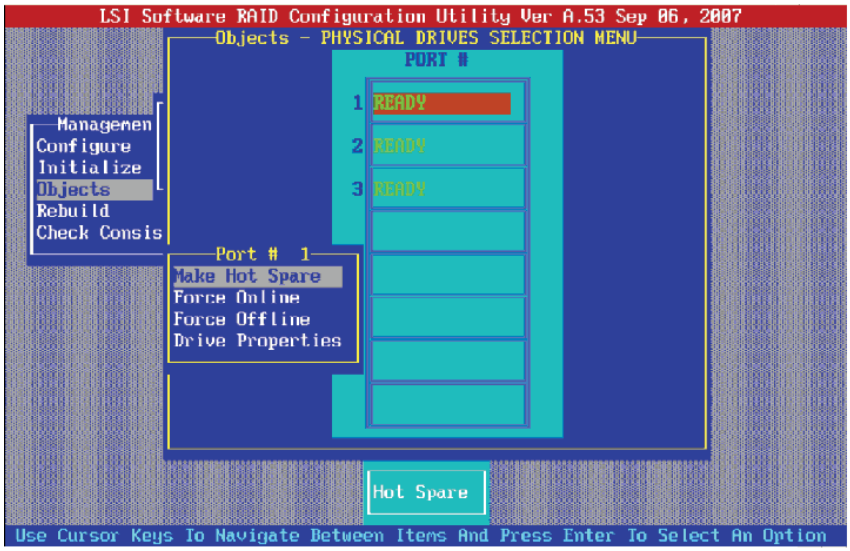


3. A screen will appear to display all drives that are available in the system.

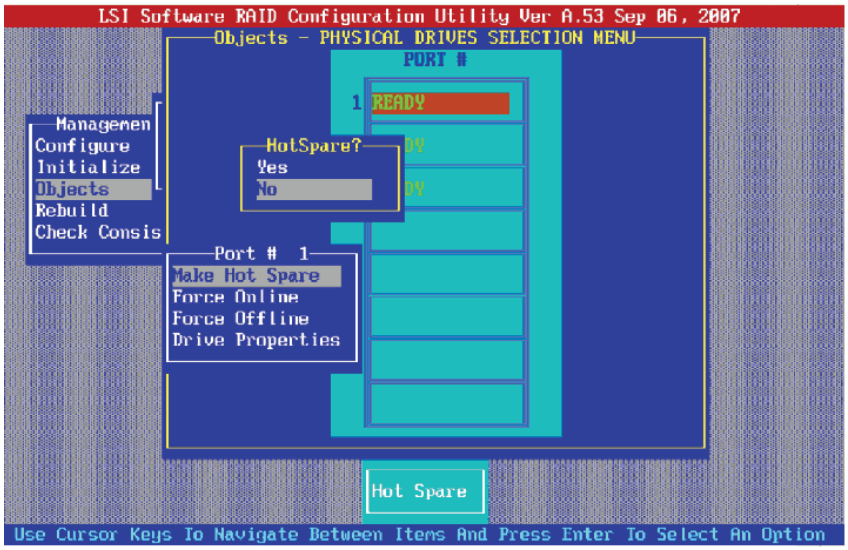


4. Using the arrow keys, select the drive that you wish to configure as hotspare and press <Enter>.

5. A screen with Configuration Setting Options for the drive you have selected will appear. Using the arrow keys, select Make Hotspare and press <Enter>.



6. A screen with a dialogue box will appear, asking whether you wish to proceed with Hotspare configuration. Select Yes and press <Enter> to make Global Hotspare. Select No and press <Enter> to cancel the selection.



To Force a Drive Online or Offline

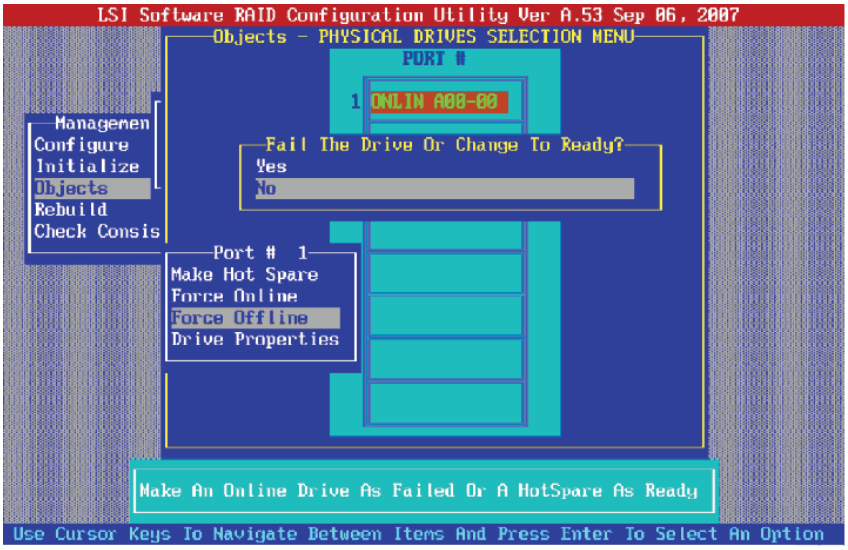
If a drive has gone offline due to power outage or other reasons, you can use the Objects Menu to force it online. You can also force a drive in a redundant array offline, so a hotspare drive can automatically replace it. Please note that an auto rebuild will begin immediately when the LSI MegaRAID finds an available hotspare drive to replace the drive that is offline.

1. From the LSI MegaRAID Main Menu, select Objects and press <Enter>.

2. When the Objects submenu appears, select Physical Drive and press <Enter>.

3. When the screen of all available Physical Drives appears as shown on the bottom of Page 2-21, using the arrow keys to select the drive you wish to force online or offline and press <Enter>.

4. A screen with Configuration Setting Options for the drive you selected will appear. Using the arrow keys, select Online or Offline and Press <Enter>. If you have selected Offline and pressed <Enter>, a screen similar to the one shown below will appear.



5. Select Yes to proceed with the configuration. Select No to cancel the selection.

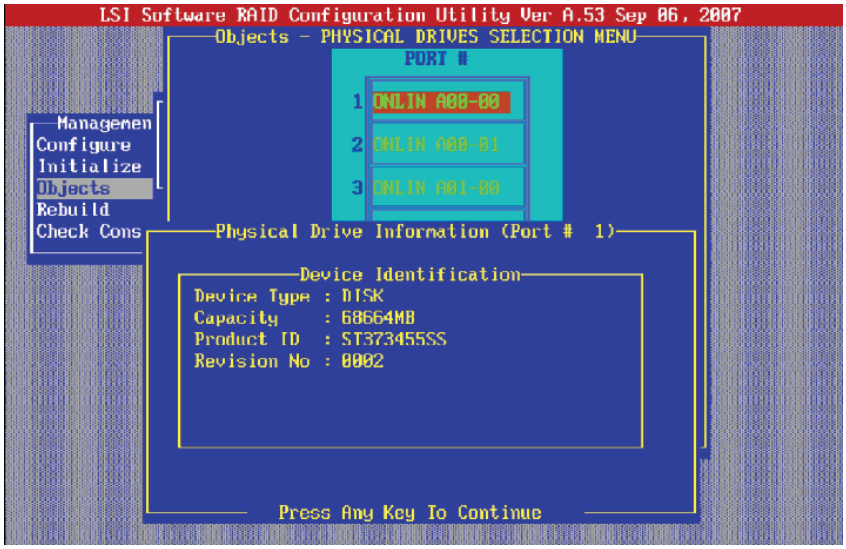
Viewing the Properties of a Physical Drive

1. From the LSI MegaRAID Main Menu, select Objects and press <Enter>.

2. When the Objects submenu appears, select Physical Drive and press <Enter>.

3. When the screen of all available Physical Drives appears as shown on Page 2-21, using the arrow keys, select the drive whose properties you wish to view and press <F2>. The properties of the drive you selected will appear as follows.

Note: The properties (parameters) of a physical drive shown on the screen are for display only. You cannot update or change the properties or parameters of a physical drive.



Viewing and Updating the Properties of an Adapter

1. From the LSI MegaRAID Main Menu, select Objects and press <Enter>.

2. When the Objects submenu appears, select Adapter and press <Enter>.

3. Select the adapter whose properties you wish to view/update and press <Enter>. The properties of the Adapter you selected will appear.

4. If you wish to change the value of a parameter (property), select the parameter and press <Enter>.

5. Type a different value for this parameter (property) and press <Enter>.

6. After you have finished all the changes, press <Esc> to return to the LSI MegaRAID Main screen.

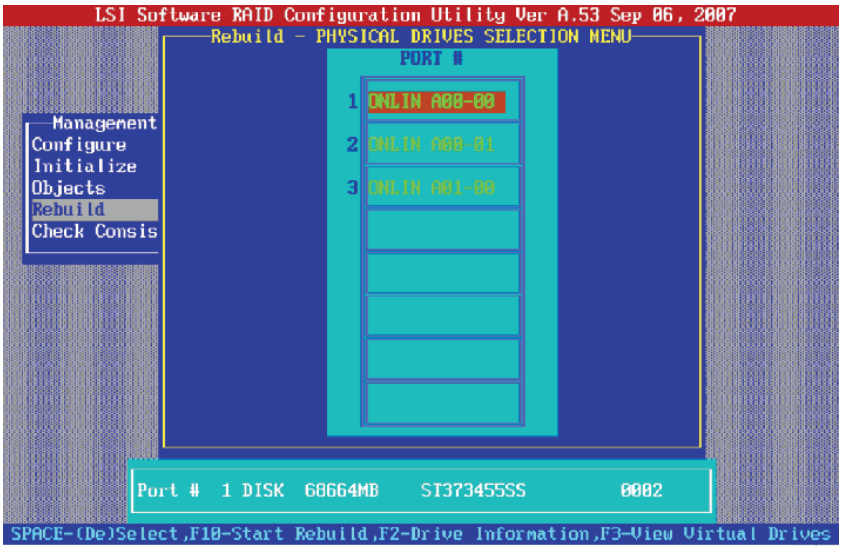
2-9 Rebuilding a Disk Drive by Using the Rebuild Menu

The LSI MegaRAID Software allows you to rebuild a failed drive in a redundant array. A failed drive can be rebuilt only when its physical presence can be detected, and its size is greater than or equal to the defined size of the array. (A rebuild will not be started if a failed drive's size is smaller than the defined size of the array.)

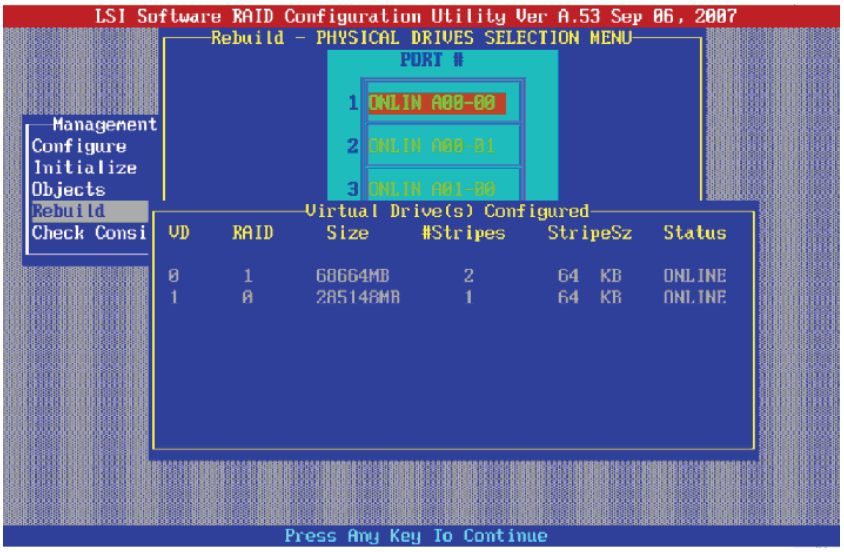
Rebuilding a Physical Drive

Follow the steps to rebuild a failed driving using the rebuild setting.

1. From the LSI Main Menu, select Rebuild and press <Enter>.



2. Using the up/down arrow keys, select the physical drive you wish to rebuild and press <Spacebar>. The information or properties of the selected drive will appear as shown below:



3. If the disk drive you have selected is the one you wish to rebuild, press <F10> and select Yes at the confirmation prompt to start rebuilding the drive.

4. A graphic showing the progress of the rebuild will appear until it is complete.

5. When rebuilding is complete, a message indicating "Rebuilding of the drive you selected has completed successfully" will appear. The status of the rebuilt drive will be changed from "failed" to "online."

6. Press <Esc> to return to the LSI MegaRAID Main menu.

Warning: Any rebuilding in progress will be aborted, and the disk drive remains "failed," if you restart the rebuild. The rebuilding will start at 0%.

Rebuilding an Virtual Drive by Using the Rebuild Setting

Follow these steps to rebuild a failed virtual driving using the rebuild setting.

1. From the LSI Main Menu, select Rebuild and press <Enter>.

2. To view all virtual disk drives in the system, press <F3>. A screen will appear to show all the virtual drives in the system.

3. Using the up/down arrow keys, select the virtual drive you wish to rebuild and press <Spacebar>. The information or the properties of the selected virtual drive will appear.

4. If the disk drive you selected is the one you wish to rebuild, press <F10> and select Yes at the confirmation prompt to start rebuilding the drive. A graphic showing the progress of the rebuild will appear until it is complete.

5. When rebuilding is complete, a message indicating "Rebuilding of the drive you selected has completed successfully" will appear. The status of the rebuilt drive will be changed from "failed" to "online."

6. Press <Esc> to return to the LSI MegaRAID Main menu.

Warning: Any rebuild in progress will be aborted, and the disk drive remains "failed," if you restart the rebuild. The rebuild will start at 0%.

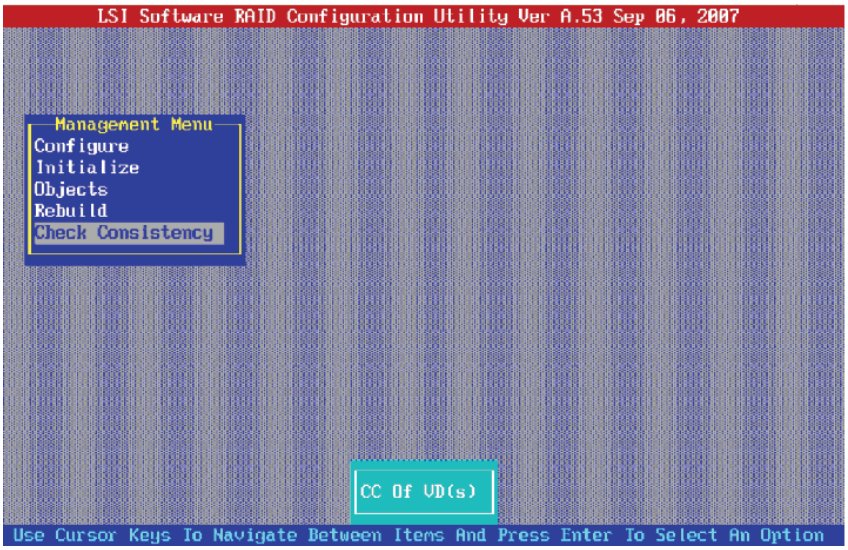
2-10 Checking Data Consistency of a Disk Drive

The LSI MegaRAID Software allows the user to check data consistency between the source drive and its mirrored drive (the target drive) for RAID 1 or RAID 10 arrays. Any differences found between these two drives will be automatically corrected if you run Check Consistency.

Checking Data Consistency

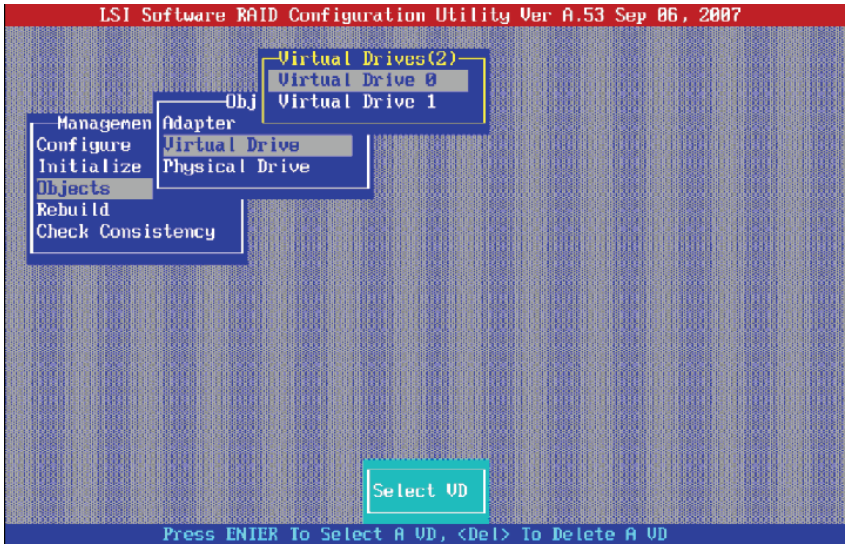
Follow the steps below to check data consistency between the source drive and the mirrored drive for RAID 1 and RAID 10 arrays.

1. From the LSI Main Menu, select Check Consistency and press <Enter>.

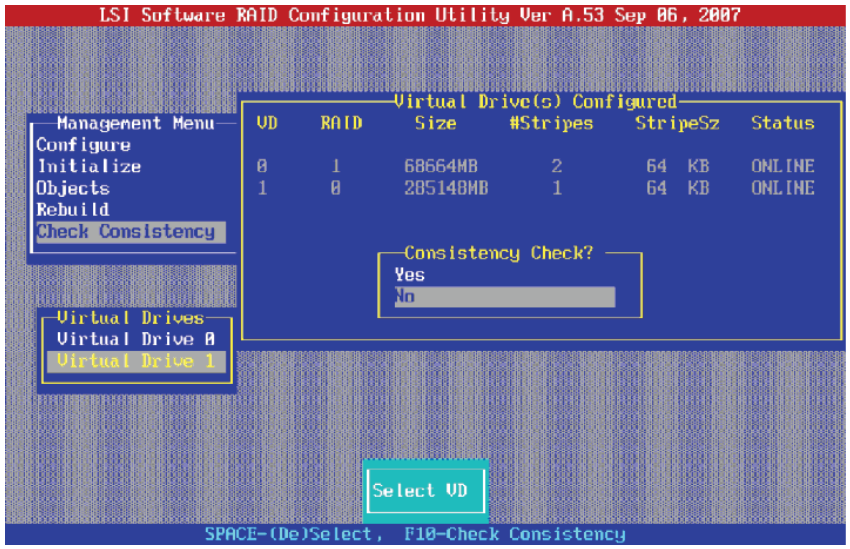


2. A list of configured virtual drives will be displayed. Using the up/down arrow keys, select the virtual drive for which you wish to check data consistency and press <Spacebar>.

Note: If a RAID 0 drive has been selected, a message will appear, indicating that Check Consistency cannot be performed. To continue, deselect this drive, select a redundant drive and press <Spacebar> again.



3. Once you have selected the correct redundant drive to check consistency, press <F10>. A screen with a confirmation prompt will appear as shown below:



4. At the prompt, select Yes and press <Enter> to proceed with the data consistency check. A graphic showing the progress appears until it completes.

Note: If data inconsistency is found during Check Consistency, the LSI MegaRAID will automatically fix the error by writing the source data to the mirrored (target) drive. When this occurs, the following message will appear at the bottom of the screen:

The Data on the Drives is inconsistent. Repair Done!

However, if a media error is found on the source drive or a hard media error is found on the mirrored (target) drive, a dialogue box will appear with the following message:

Errors in Reading Sectors! Proceed Anyway (Y/N)?

Press <Y> to skip the bad sector (block) and continue with the consistency checking for the remaining sectors.

Press <N> to abort the process of Check Consistency.

If you press <Esc> while Check Consistency is running, the following options will appear:

- ***Stop:*** Select stop to stop checking consistency for the time being, allowing it to be automatically resumed at a later time if Auto_Resume has been enabled through the Adapter submenu in the Objects Menu.

- ***Continue:*** Select Continue to start Check Consistency normally.

- ***Abort:*** Select Abort to abort Check Consistency completely. If you restart it, it will begin at 0% again.

2-11 Clearing a Storage Configuration

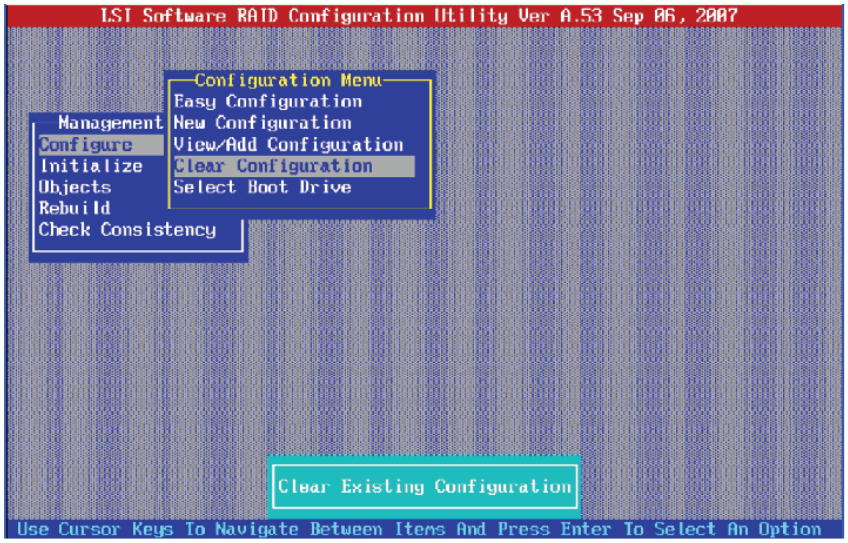
The LSI MegaRAID Software allows the user to clear a storage configuration. Be sure to back up all the data you intend to keep before starting this procedure.

Clearing a Storage Configuration

Follow the steps below to clear a storage configuration.

1. From the LSI Main Menu, select Configure and press <Enter>.

2. From the Configuration submenu, select Clear Configuration and press <Enter>.



3. When a confirmation message appears, select Yes at the prompt and press <Enter> to proceed with Clearing Configuration. If you do not wish to clear configuration, select No and press <Enter>.

4. Press <Esc> to return to the LSI MegaRAID Main Menu.

(Disclaimer continued)

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