HighPoint Rocket 620AP

SATA 6Gb/s, PCI-Express 2.0 x1

Host Adapters User's Guide

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HighPoint Technologies, Inc.

HighPoint Technologies, long recognized as a leader in mass storage technologies, specializes in the design and manufacturer of HBA (Host Bus Adapters) and HighPoint RAID IP (Intellectual Property). HighPoint provides a broad range of scalable hardware HBA's that meet the storage requirements for all customer types, ranging from Enterprise corporations, SMB (Small Medium Sized Business), to the home PC enthusiast.

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1 – Rocket 620AP

1.1 - The Rocket 620AP – Smart Hybrid Drives

Rocket 620AP host adapters are breakthrough SATA 6Gb/s controllers; their innovative Smart Hybrid Technology enables you to take full advantage of low cost, large capacity SATA hard drives and combine them with the high performance benefits provided by SSD devices. In addition, an intelligent algorithm automatically migrates regularly accessed "hot" data to the SSD region, while safely storing all of your files on a larger capacity SATA hard disk drive.

Rocket 620AP easy to use BIOS interface allows you to quickly configure Hybrid Virtual disks between SSD's and SATA hard drives – Safe mode for data security, and Capacity for high-performance storage.

1.2 - Card Features and Specifications

Host Side Interface	PCI-Express x1 (Gen2)
Disk Interface	SATA 6Gb/s
Number of Channels	2 SATA 6Gb/s ports
Virtual Disk Support	Capacity Mode(for best performance) Safe Mode(for performance and fault tolerance)
Operating Systems Support	Windows 7, 8/8.1, 10
Virtual Disk Management	BIOS Utility
	MSU Manangement Software
Some Highlighted Features	BIOS booting support
	Web-based Management interface (MSU)
	Driverless installation (AHCI device)

Physical Specifications

- Size: (110mm x 62mm) 4.33″ L x 2.44″ W
- WEMI: FCC Part 15 Class B and CE

Thermal and Atmospheric Characteristics:

- Working Temperature Range: +5℃~ + 55℃
- Relative Humidity Range: 5% ~ 60% non-condensing
- Storage Temperature: -20℃ ~ +80℃
- MTBF: 920,585 Hours

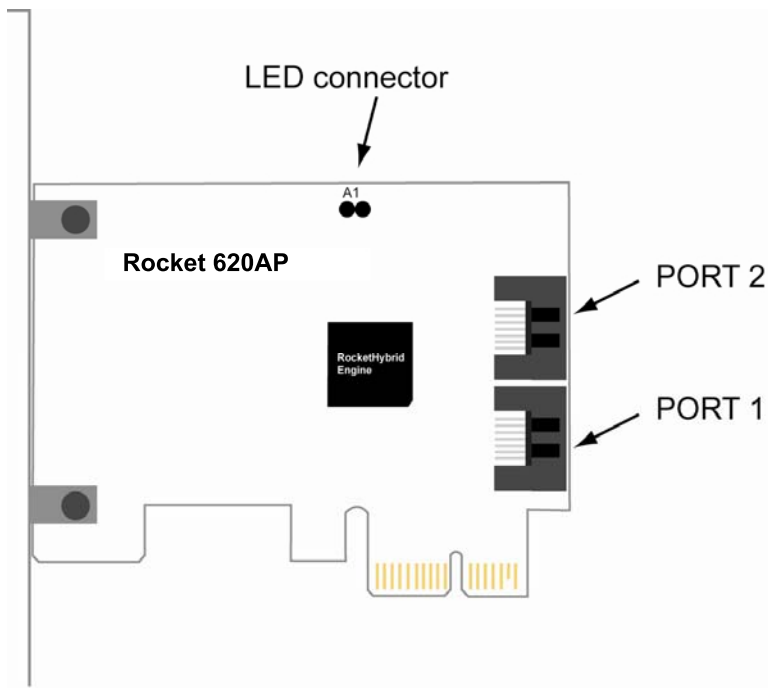**Electrical Characteristics:**

PCI-Express	3.3V	12V
Power	1W max	3W max

1.3- Kit Contents

- Rocket 620AP Host Adapter
- 2 SATA cables
- Low-profile bracket
- Quick installation Guide

2 – Installing the Host Adapter

2.1 – Rocket 620AP

Port1, Port2,

These represent the Rocket 620AP 2 internal SATA ports.

These Ports can support up to 2 SATA hard disks.

2.2 - LED Connections (Figure displays the Rocket 620AP)

LED connectors (Drive-activity): Rocket 620AP host adapter has 1 LED connector that is used to indicate the activity status of hard drives attached to the card's 2 SATA channels.

A1

Jumper A1 provides LED support for Drive Activity
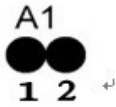
Pin Number Connections	Pin 1	Pin2
A1	Channel/Disk 1	Channel/Disk 2

2.3 - Installing the Rocket 620AP Host Adapter

Note: Make sure the system is powered-off before installing Rocket 620AP host adapter. The Rocket 620AP includes both standard and low-profile brackets. It may be necessary to attach the low-profile bracket in place of the standard bracket, depending upon the chassis design.

1. Open the system chassis and locate an unused PCI -Express x1 (Gen2).

2. Remove the PCI slot/bracket cover.

3. Gently insert the Rocket 620AP card into the PCI-Express slot, and secure the bracket to the system chassis.
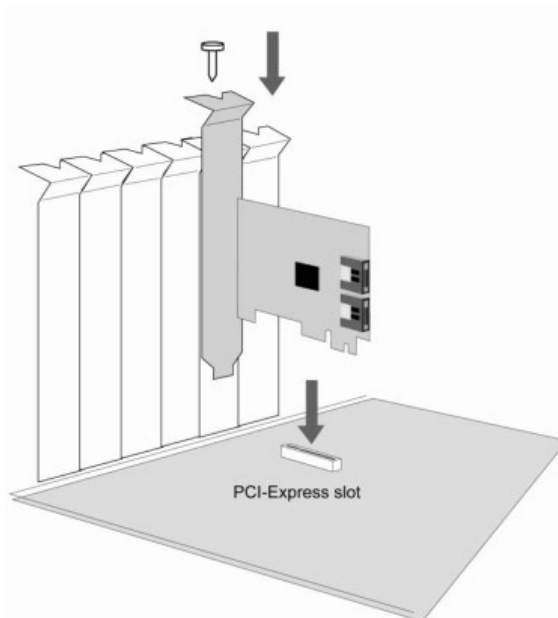
4. After installing the adapter, attach hard drives to the host adapter using the data cable. The Rocket 620AP models utilize 2 SATA/eSATA cables, which are included in each retail box. Each SATA cable can support a single SSD or HDD. Consult the chassis manual for proper installation procedures.

    Note: Many server-level chassis include hard-drive hot-swap bays. For these system chassis, cables are attached to the chassis backplane, rather than directly to each individual hard drive. Consult the chassis manual for proper installation procedures.

5. Close and secure the system chassis.

2.4 - Verifying Installation

Once the host adapter and hard drives have been installed into the chassis, boot-up the system to verify that the hardware is properly recognized.

1. Power on the system. If the system detects the presence of the adapter, the Rocket 620AP BIOS Utility will be displayed during boot up.
2. Press **Ctrl**+**M** to access the Rocket 620AP adapter's BIOS Utility.

The BIOS Utility will display information about hard drives attached to the adapter.

Make sure all attached drives are detected by this utility. If any of the hard drives are not detected, power down the system and check the power and cable connections.

2.5 - Windows 7, 8/8.1, 10 – Native Driver support

The Rocket 620AP is natively support by the Windows 7, 8/8.1, 10 operating systems. It will be recognized automatically, as an AHCI device. Driver installation is not required.

3 - Launching the BIOS

Table 1-1 lists the keyboard controls for launching the BIOS during the controller's Power-On Self Test (POST).
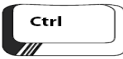
Table 1-1 Launching the BIOS

Key	Function
Ctrl + **M**	**Launch the BIOS Utility** Press the key combination during the controller's POST. *Note: You may have to wait a few seconds for the controller BIOS to appear.*

Figure 1-1 shows the messages displayed during the POST of the Rocket 620AP.

Figure 1-1 BIOS Post Message

```
Marvell 88SE91xx Adapter - BIOS Version 1.0.0.1029
PCI-E X1 Bandwidth Usage: 5.0Gbps    Configure SATA as: AHCI Mode

Virtual Disk
        No Virtual Disk!
Physical Disk
 [ID]  [Disk Name]                      [Size]          [Speed]
   0    C300-MTFDDA25                    256GB           6.0G

















Press <Ctrl>+<M> to enter BIOS Setup or <Space> to continue_
```
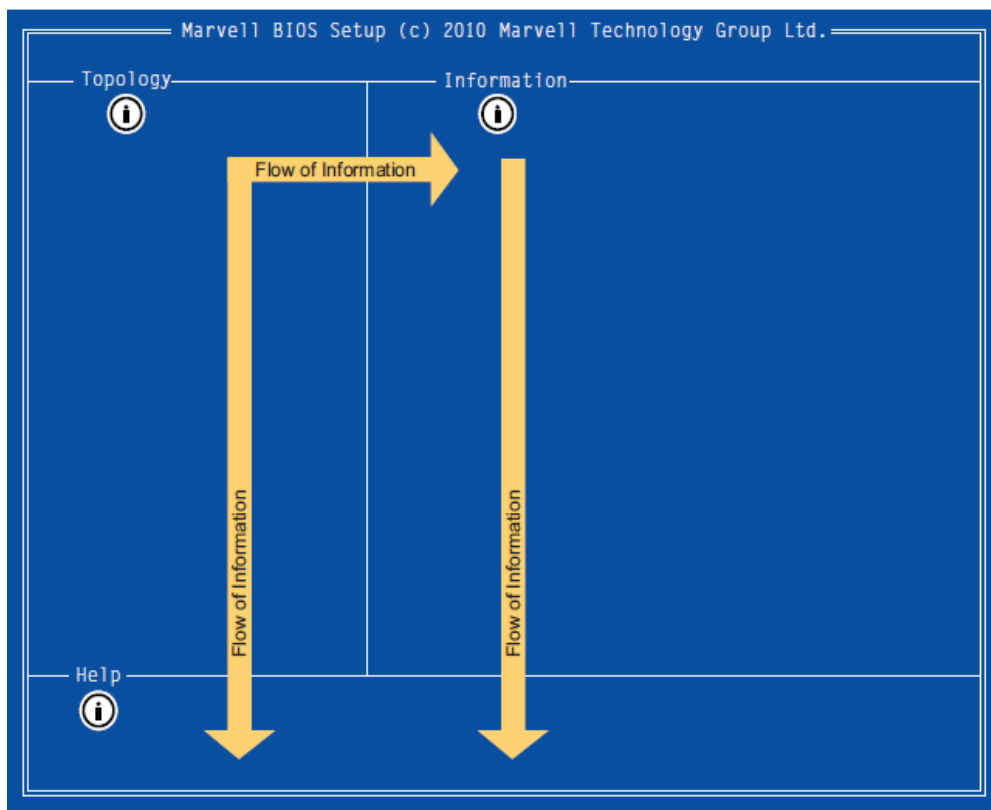
4 - Navigating the BIOS

As shown in Figure 1-2, the BIOS user interface (UI) is divided into three main panes:

- Topology

- Information
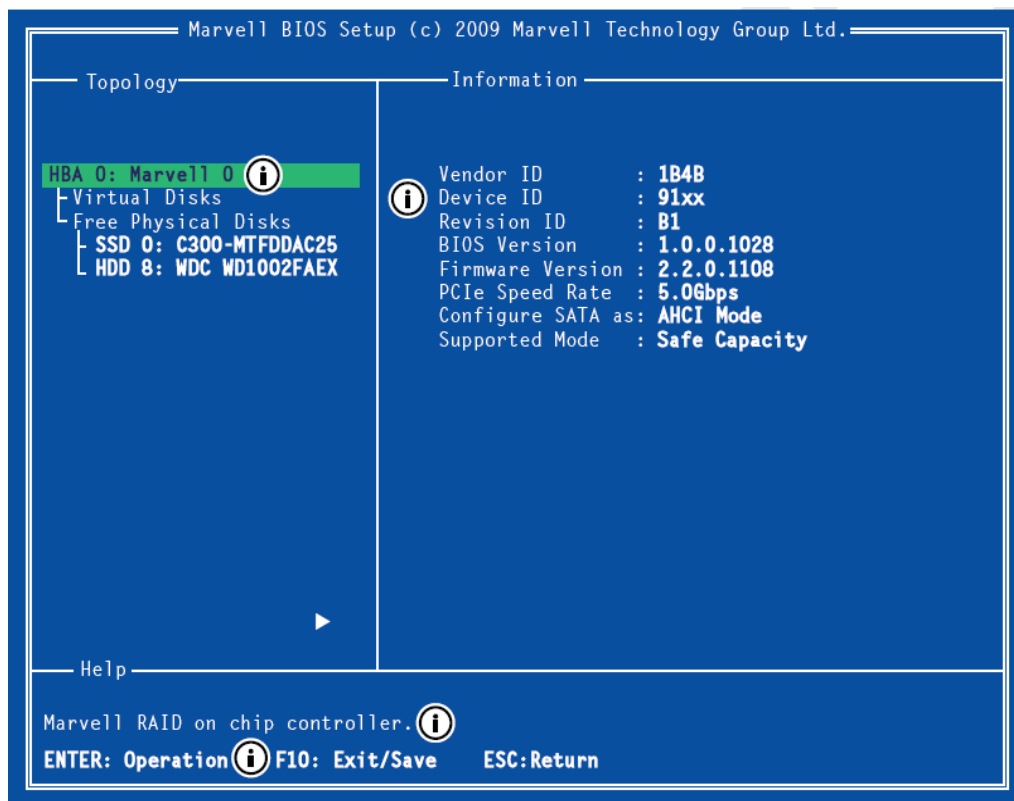
- Help

Figure 1-2 BIOS User Interface

Note: This symbol is a visual element used in this document to emphasize specific areas of the BIOS UI as relevant to the topic under discussion. It is *not* part of the Marvell BIOS UI. The arrow lines in Figure 1-2 show the flow of information in the user interface. Selections made in a pane determine the contents shown in other panes in the following ways:

- Content in the **Information** pane is populated based on selections in the **Topology** pane.
- Content in the **Help** pane is populated based on selections in both the **Topology** and **Information** panes.

4.1 Topology

As shown in Figure 1-3, the **Topology** pane uses a tree *view* to list and show the relationships between the various physical/virtual devices attached to the system. The devices on this list include the HBA, physical disks, and virtual disks.

Figure 1-3 BIOS UI Example Selection

4.2 Information

The **Information** pane is populated based on the selection in the **Topology** pane. Figure 1-3 shows information relevant to the selection **HBA 0: Marvell 0**.

4.3 Help

The **Help** pane is populated based on selections in both the **Topology** and **Information** panes. The **Help** pane in Figure 1-3 shows a brief description and lists keyboard controls for performing actions relevant to the selection.

4.4 Keyboard Controls

Table 1-2 lists the controls for navigating and using the BIOS Interface.

Table 1-2 Navigation Keys

Key	Function
↑ ↓	Scrolls menu/list items.
Enter	Selects an item and shows a pop-up menu with options.
Space	Toggles between Enable/Disable states and Select/Unselect states (as applicable).
Esc	Go backwards.
Y N	Confirm (Y) or Deny (N) settings.
F10	Save and Exit the BIOS.

5 - Creating Hybrid Drives

Creating a Hybrid Drive

The BIOS Utility allows you to create Hybrid Drives using the **Configuration Wizard.**

To create Hybrid Drive:

1. In the **Topology** pane, scroll to **HBA 0: Marvell 0** and press **Enter** to select. A menu pops up, as shown in Figure 1- 4.
    Select **Configuration Wizard** and press **Enter** to begin creating the virtual disk.

    Figure 1- 4 Configuration Wizard

2. Use the arrow keys to scroll through the list of free physical disks, as shown in Figure 1- 5. Press **Space** to select/unselect a disk.
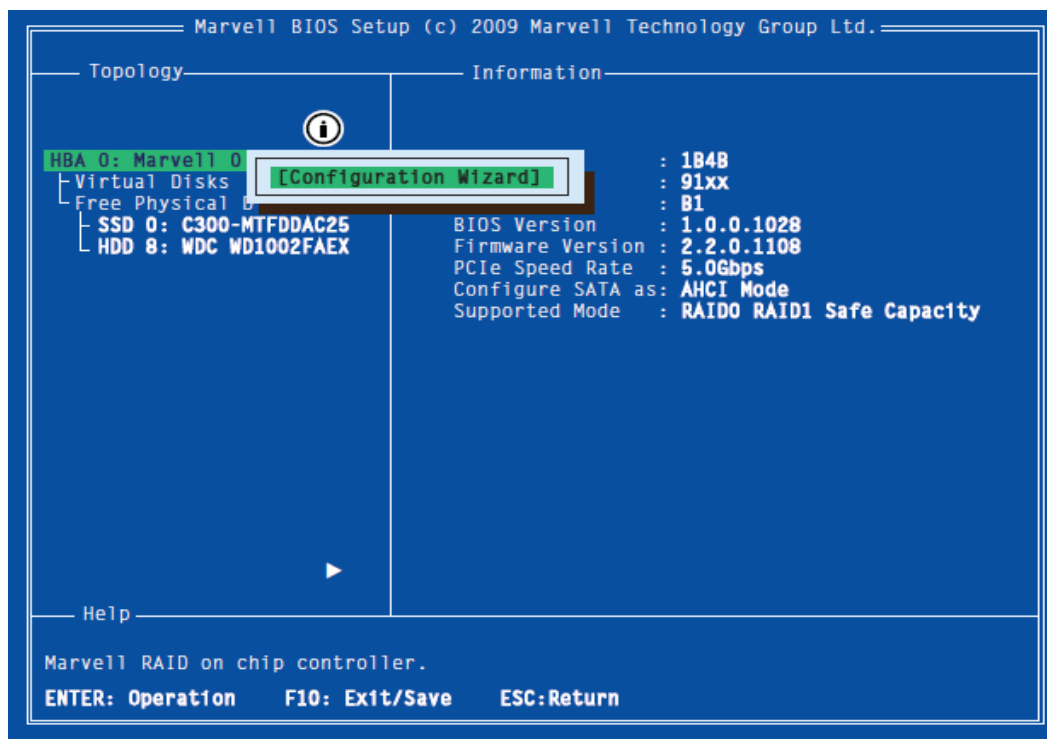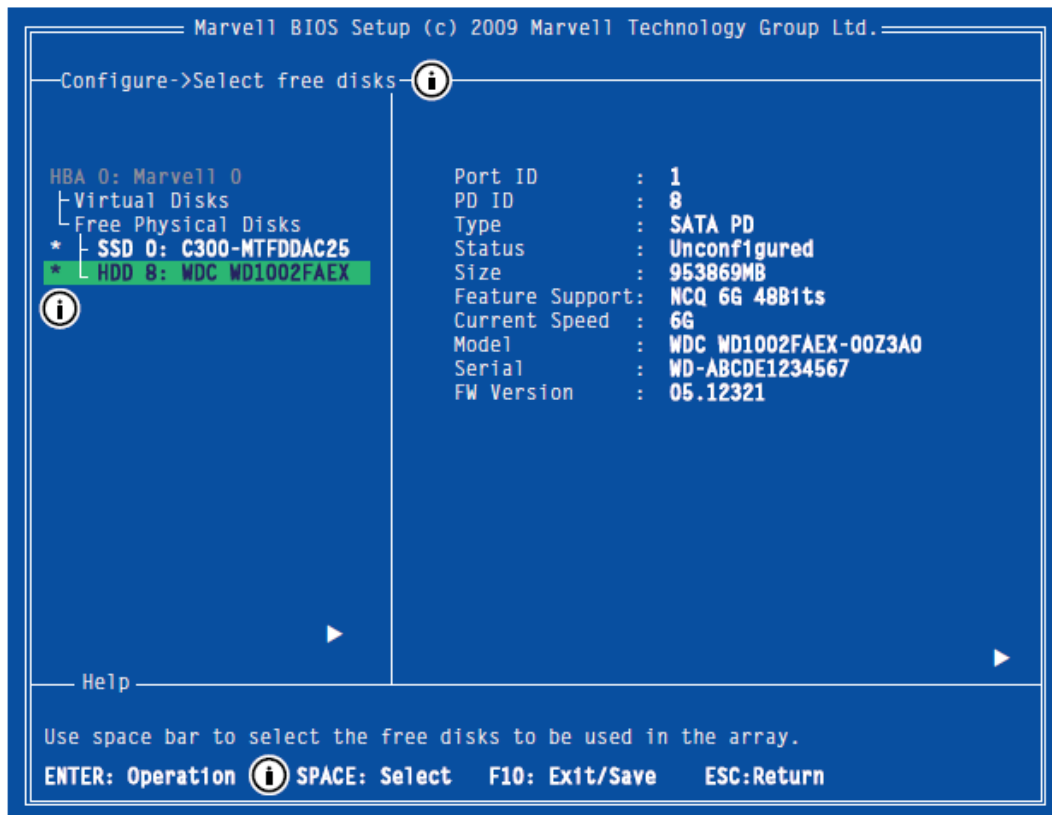
Note: When a disk is selected, an asterisk (*) appears to the left of the disk label, as shown in Figure 1-5.

Figure 1- 5 Select Free Disks


```
══════════ Marvell BIOS Setup (c) 2009 Marvell Technology Group Ltd.══════════
──Configure->Select free disks─ⓘ─────────────────────────────────────────────

  HBA 0: Marvell 0                Port ID          :  1
   ├Virtual Disks                 PD ID            :  8
   └Free Physical Disks           Type             :  SATA PD
  *  ├ SSD 0: C300-MTFDDAC25       Status           :  Unconfigured
  *  └ HDD 8: WDC WD1002FAEX       Size             :  953869MB
  ⓘ                                Feature Support:  NCQ 6G 48B1ts
                                   Current Speed  :  6G
                                   Model          :  WDC WD1002FAEX-00Z3A0
                                   Serial         :  WD-ABCDE1234567
                                   FW Version     :  05.12321


                         ▶                                            ▶
  ── Help ──
  Use space bar to select the free disks to be used in the array.
  ENTER: Operation ⓘ SPACE: Select   F10: Exit/Save    ESC:Return
```
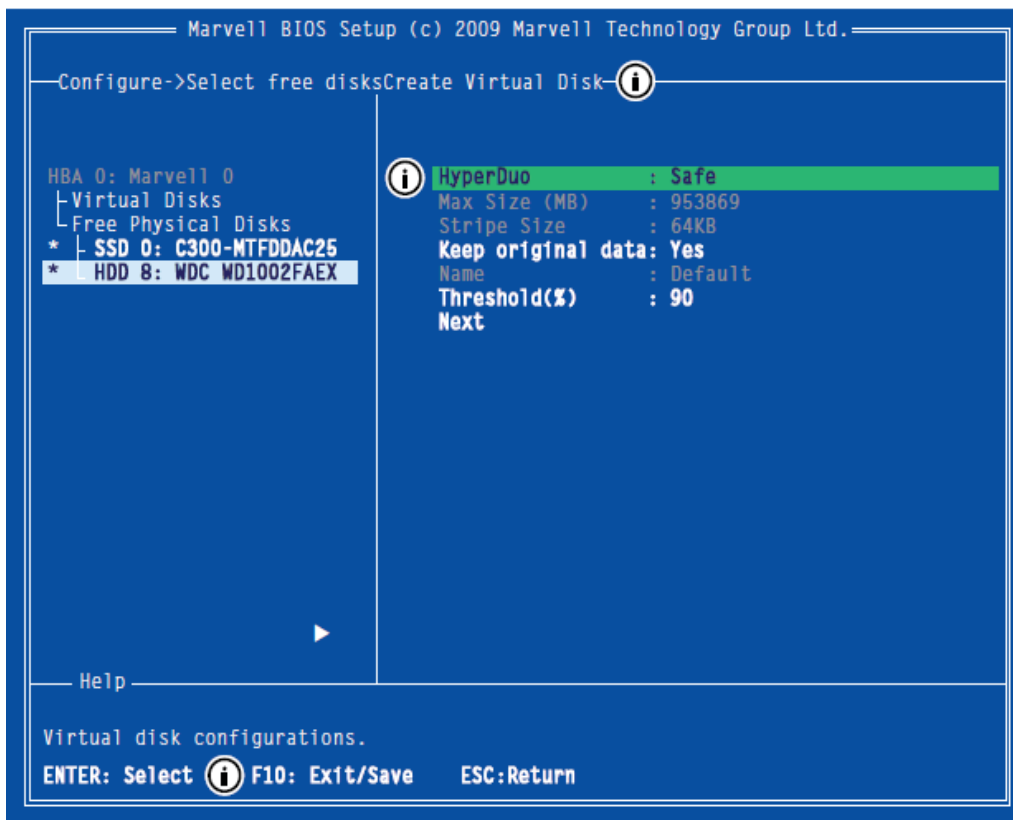
Note: Hybrid mode requires 1 SSD and 1 SATA hard disk.

3. After selecting the required disks, press **Enter** to continue.

4. The **Create Virtual Disk** configuration options appear in the **Information** pane, as shown in Figure 1- 6. Available keystrokes are listed in the **Help** pane when a setting is highlighted.
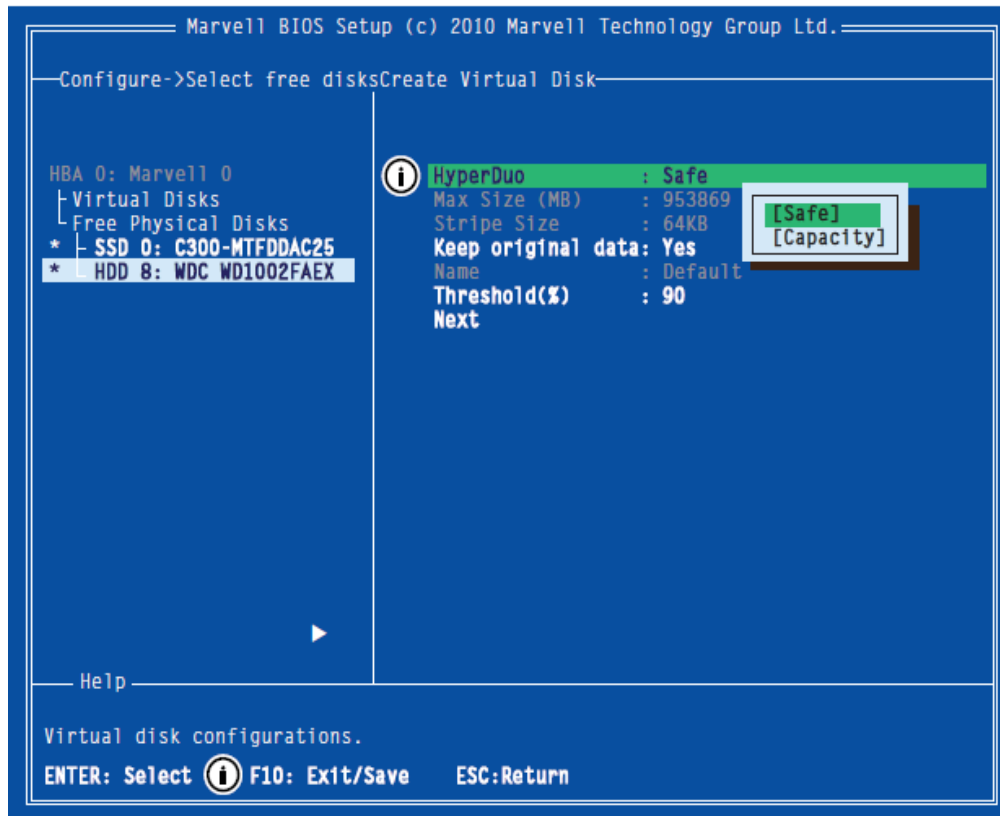
Figure 1- 6 Create Virtual Disk

Note: Max Size (MB), Stripe Size, and Name options are unavailable in the current version of MBU.

5. Highlight **Hybrid** and press **Enter**.

A menu will be displayed (as shown in Figure 1- 7) listing available Hybrid modes. Select your preferred mode and press **Enter**.

Figure 1- 7 Hybrid Mode

Note: The default Hybrid mode is Safe mode.

- **Safe** mode creates a virtual disk that is optimized for fault tolerance. It is safe to use with hard drives that contain existing data.

- **Capacity** mode creates a virtual disk that is optimized for read and write performance.

6. Highlight **Keep original data** and press **Enter** to select.

A menu will be displayed, as shown in Figure 1- 8. Select **Yes** or **No** and press **Enter**.

**Figure 1- 8 Keep Original Data**
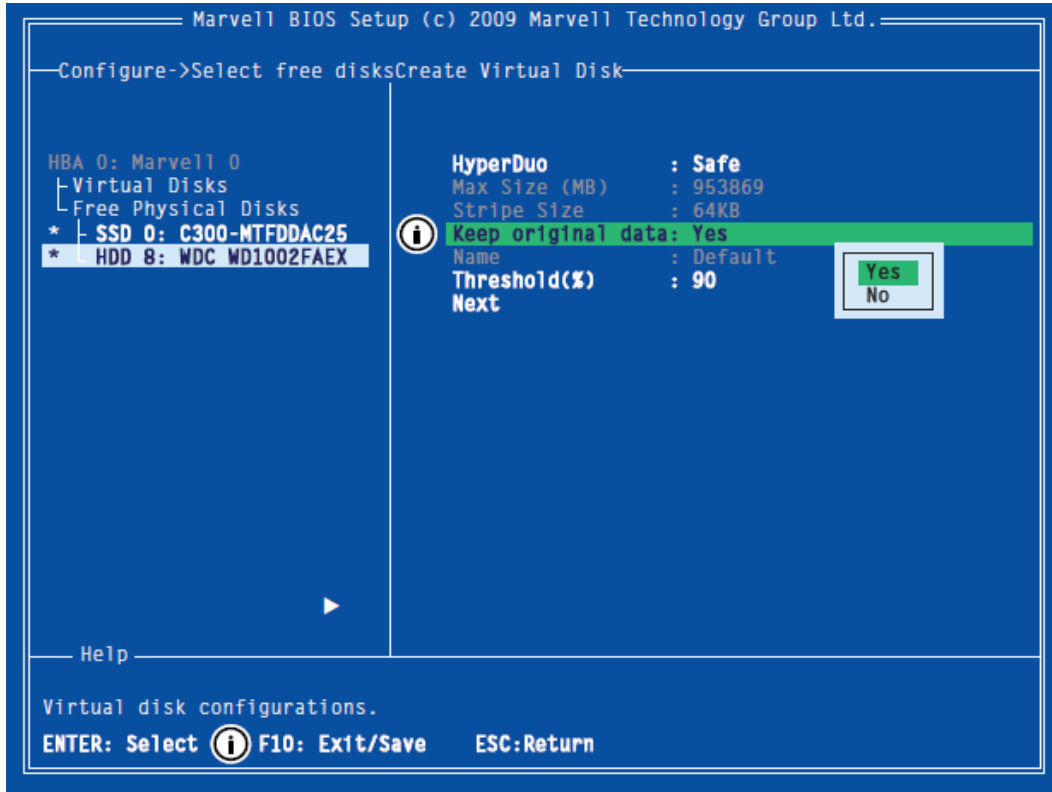
Note: This option is disabled when selecting Capacity mode, as it is inherently data-destructive.

7. After configuring the virtual disk, highlight **Next**.
Press **Enter** to create the virtual disk.

8. Press **Y** to confirm the creation of the virtual disk, as shown in Figure 1- 9.
The virtual disk is now listed in the **Topology** pane.

Figure 1-9 Create Virtual Disk
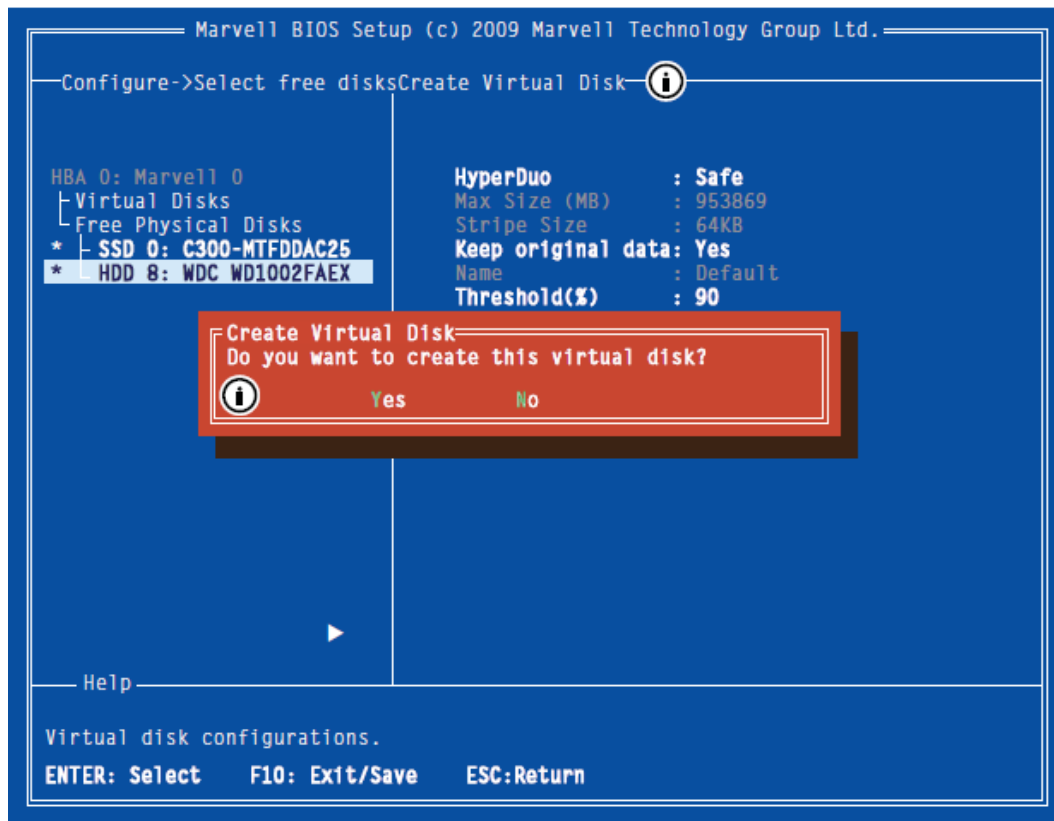
6- Deleting a Hybrid Drive

This topic describes the procedure to delete a Hybrid Drive using the BIOS interface.

To delete a Hybrid Drive:

WARNING Using **Delete** permanently erases all data on the Hybrid Drive.

1. In the **Topology** pane, select **Virtual Disk (Test** in Figure 1-17) and press **Enter**. A menu pops-up, as shown Figure 1-17.
2. Select **Delete** to delete the virtual disk, as shown in Figure 1-17.
3. Press **Y** to select **Yes** when prompted **Do you want to delete this virtual disk?**.
4. Press **Y** to select **Yes** when prompted **Do you want to delete MBR from this virtual disk?**

Figure 1-17 Delete Virtual Disk

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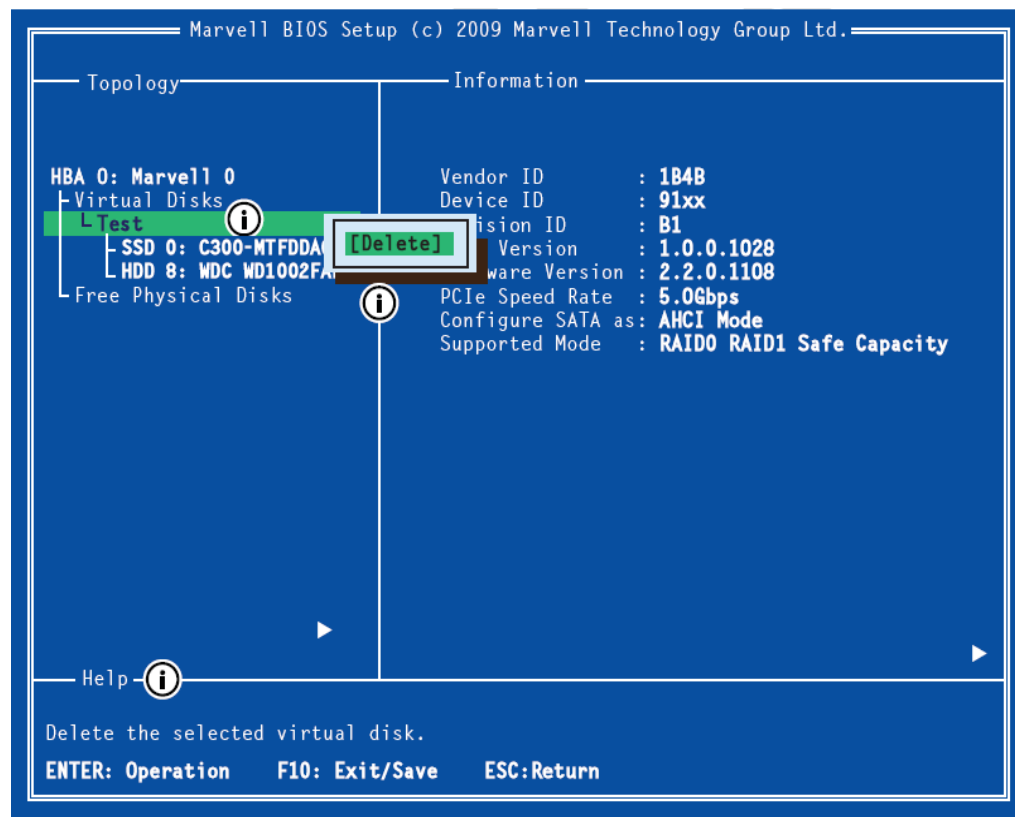
7 - Installing MSU in Windows

This section describes the procedure for installing MSU in Windows.

**To install MSU for Windows 7, 8/8.1, 10**
1. Verify that the Rocket 620AP is detected by the system. Access Device Manager and make sure the AHCI driver is present, under , as described in section

2. Run **MSUSetup.exe**. The **MSU Setup Wizard** appears, as shown in Figure 1-2.

Figure 1-2 MSU Setup Wizard

3. Select **Next**, as shown in Figure 1-2.The **License Agreement** window appears, as shown in Figure 1-3.
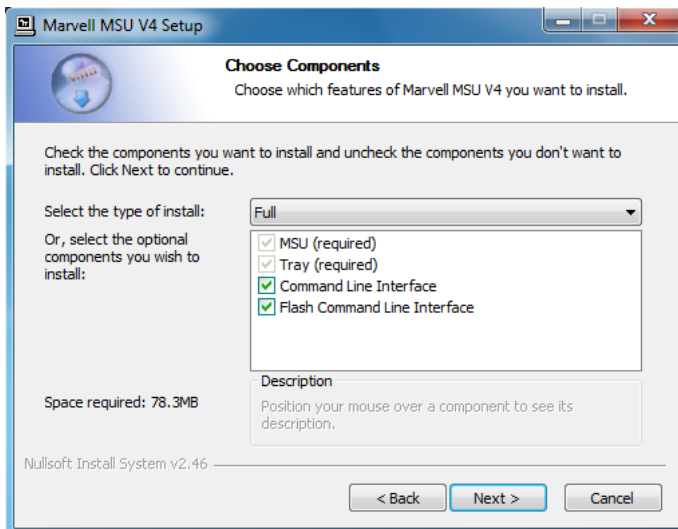
Figure 1-3 License Agreement
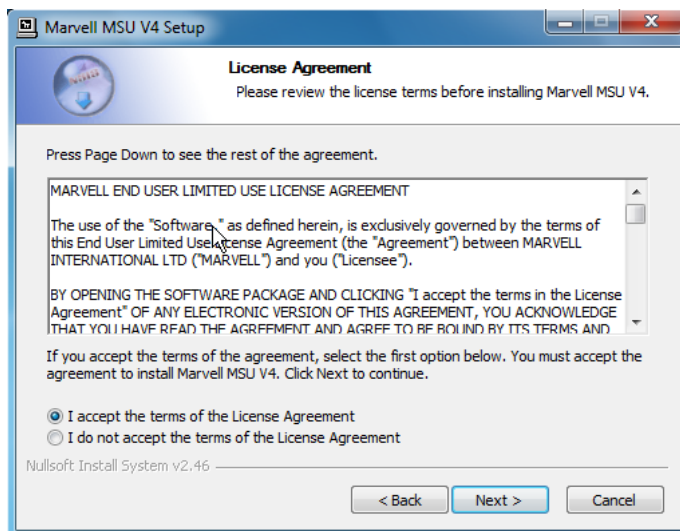
4. Read the **License Agreement**.
Select **I accept the terms of the License Agreement**, as shown in Figure 1-3.

5. Select **Next**, as shown in Figure 1-3, to continue with the installation.
The **Choose Components** window appears, as shown in Figure 1-4.

Figure 1-4 Choose Components

Note: Installation of the Command Line Interface utility and Flash Command Line Interface utility is optional and disabled by default. Check these components if you wish to install them.

6. Select **Next,** as shown in Figure 1-4.
The **Choose Install Location** window appears, as shown in Figure 1-5, with the default location displayed in the **Destination Folder** field.
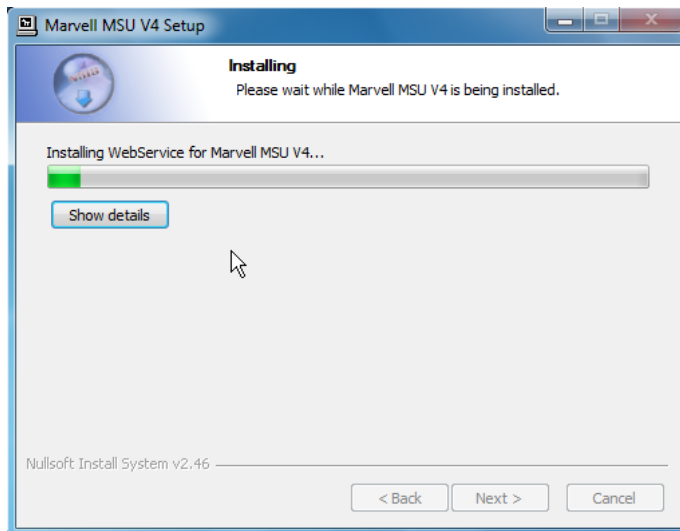
7. Select **Browse,** as shown in Figure 1-5, to specify an alternate folder if required.
Figure 1-5 Choose Install Location
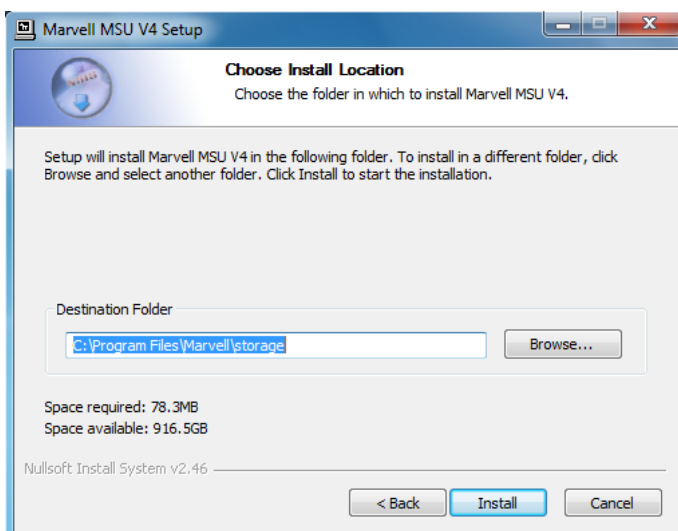
8. Select **Install**, as shown in Figure 1-5, to begin installation.
The installation wizard displays progress, as shown in Figure 1-6.

Figure 1-6 Installation Progress

9. After installing the Apache2 HTTP Server (which is a built-in component of the installation package), the installation triggers a **Windows Security Alert** on some versions of Windows, as shown in Figure 1-7. Select **Unblock** or **Allow Access** to continue.

Figure 1-7 Windows Security Alert
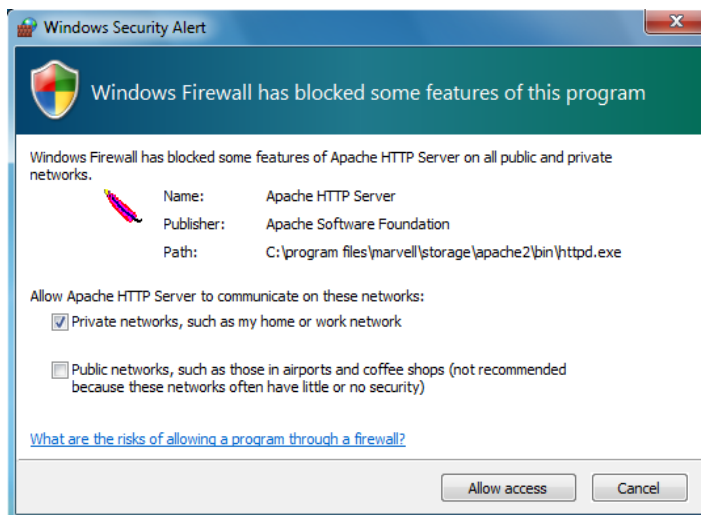
Note: Figure 1-7 shows the Security Alert that appears in Windows 7, 8/8.1, 10. The alert is similar for other Windows operating systems.

10. When the installation is complete, the wizard confirms the completion, as shown in Figure 1-8.

Click **Finish**, as shown in Figure 1-8. MSU is now installed.

Figure 1-8 Completing the Setup Wizard

8 – MSU Overview

MSU is a browser-based management utility for the Rocket 620AP host adapters.
It can create and manage Hybrid Drives, using storage and enclosure devices connected to the host adapter. This section provides an overview of MSU's user interface.

8.1 - Opening MSU

This section discusses the following:
- Opening MSU in Windows
- Tray Application for Windows

8.1.1 - Opening MSU in Windows

This section describes the procedure to open MSU in Windows.

To open MSU in Windows

1. Verify that Active Scripting or JavaScript is enabled in the default browser, as described in 9.1, Enabling Scripting.

2. Open MSU.
The MSU can be opened using any of the following methods:

- Double-click the desktop shortcut for MSU, as shown in Figure 2-8.
Figure 2-8 MSU Desktop Shortcut

OR
- Right-click the desktop shortcut for MSU, and select **Open**.
OR
- Double-click the MSU Tray Application icon.

OR
- Right-click the MSU Tray Application icon, and select **Open MSU**.

3. Upon opening, the **Login** page appears, as described in 2.5, Login.

To control a local 88SE91xx controller

4. By default, MSU uses the following URL to select the default local 88SE91xx controller (if any) installed on the local system.
https://localhost:8443/MSU/JumpPage.php?Target=LoginPage
Note: If MSU does not open the login page, replace localhost in the URL with the IP address of the local controller (127.0.0.1).

To control a remote controller

5. Type the following URL the browser address bar.

https://ip_adress:8443/MSU/JumpPage.php?Target=LoginPage
Note: Replace ip address with the IP address of the remote controller. Alternatively, you can use the System Name instead of the IP address in most internal network environments.

8.2 - Tray Application for Windows

When MSU opens in Windows, the Tray Application appears in the System Tray, as shown in Figure 2-9.
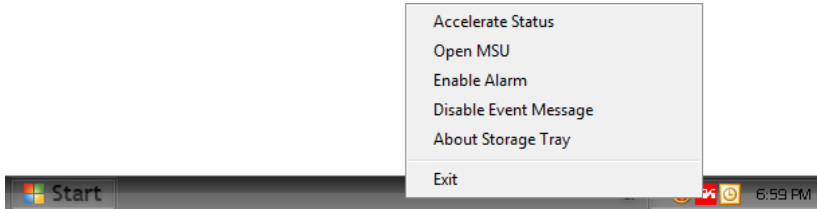
Figure 2-9 Tray Application

The Tray Application provides right-click menu options for controlling the MSU, as shown in Figure 2-10. The menu has options for performing the following tasks:
- Accelerate Status
- Open MSU
- Enable/Disable Alarm
- Enable/Disable Pop-up Event Messages
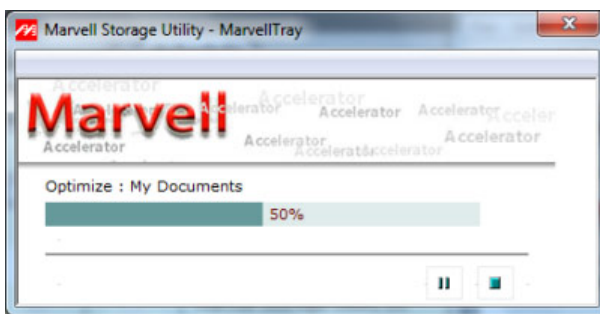- View Version Information
- Exit MSU

Figure 2-10 Tray Application: Right-click Menu

8.2.1 - Accelerate Status

Select **Accelerate Status** to see a pop-up window that displays the status of a scheduled acceleration task, as shown in Figure 2-11.

Figure 2-11 Tray Application: Accelerate Status

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8.2.2 - Open MSU

Select **Open MSU** to open MSU in the system's default browser.

Note: You can also open MSU by double-clicking the Tray Application icon.

8.2.3 - Enable/Disable Alarm

The audible alarm is disabled by default. To enable the audible alarm for critical and warning events, select **Enable Alarm**. The alarm is played through speakers connected to the Line Out jack on the computer's sound card. On controller HBAs and evaluation boards with on-board buzzer, the hardware buzzer is also sounded.
Note: The audible alarm uses the file c:/program files/marvell/raid/tray/alarm.wav.

8.2.4 - Enable/Disable Pop-up Event Messages

Event messages are pop-up messages that appear above the System Tray, as shown in Figure 2-12. Event messages are enabled by default.
Select **Enable Event Messages** and **Disable Event Messages** to toggle between enable/disable states.

Figure 2-12 Tray Application: Pop-up Event Message

8.2.5 - View Version Information
Select **About Storage Tray** to view version information for the MSU Tray Application.

8.2.6 - Exit MSU
Select **Exit** to exit MSU (and the Tray Application).

8.3 Login

This section discusses the following:
- Security Warning
- Login Page

8.3.1 - Security Warning

Note: This section only applies to Internet Explorer.

When opening MSU in some versions of Windows, Internet Explorer may detect a problem with the security certificate for the MSU web page, as shown in Figure 2-13. Select **Continue to this website (not recommended)**, as shown in Figure 2-13, to continue opening MSU.

**Figure 2-13 Internet Explorer: Website Security Certificate Warning**
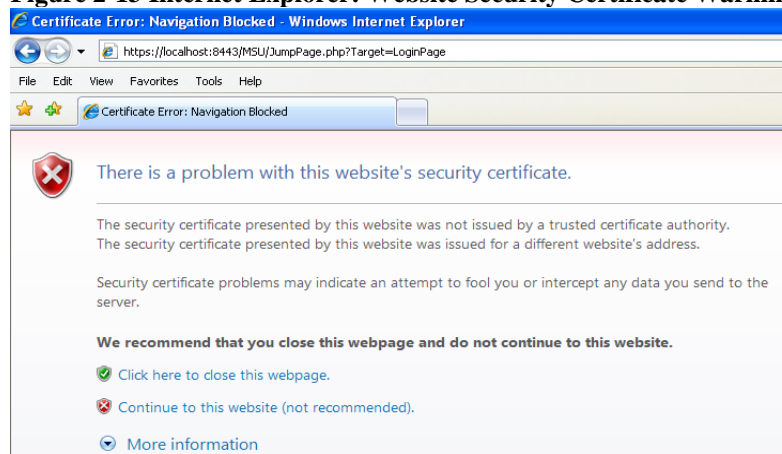
8.3.2 - Login Page

Opening the MSU will take you to a login page, as seen in Figure 2-14. Use your Windows username and password to log into the MSU. If you have a username but no password, leave the password field blank.
Note: If you are on a network, preface your username with the network domain name and a backslash.
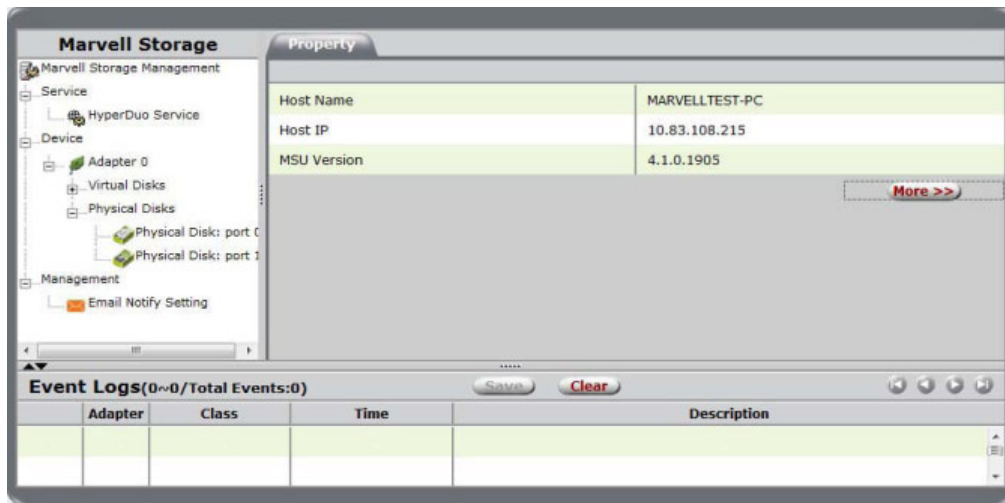**Figure 2-14 MSU Login**
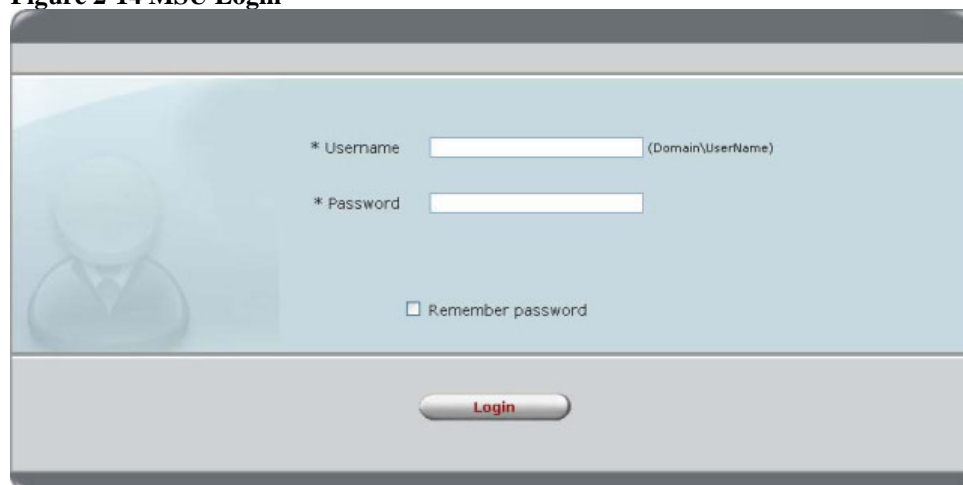
8.4 - User Interface

The MSU user interface, as shown in Figure 2-15, contains the following three panes:
- Marvell Storage Management
- Properties
- Event Logs

**Figure 2-15 MSU User Interface**

8.4.1 - Marvell Storage Management

As shown in Figure 2-16, the Marvell Storage Management pane uses a *tree* view to list and show the relationships between the various physical/virtual devices attached to the system.
Depending on the usage of the controller, this list includes the following devices and services:
- Adapter
- Physical Disk
- Enclosures
- Hybrid Drives
- Email Notify Setting

**Figure 2-16 Marvell Storage Management Pane**
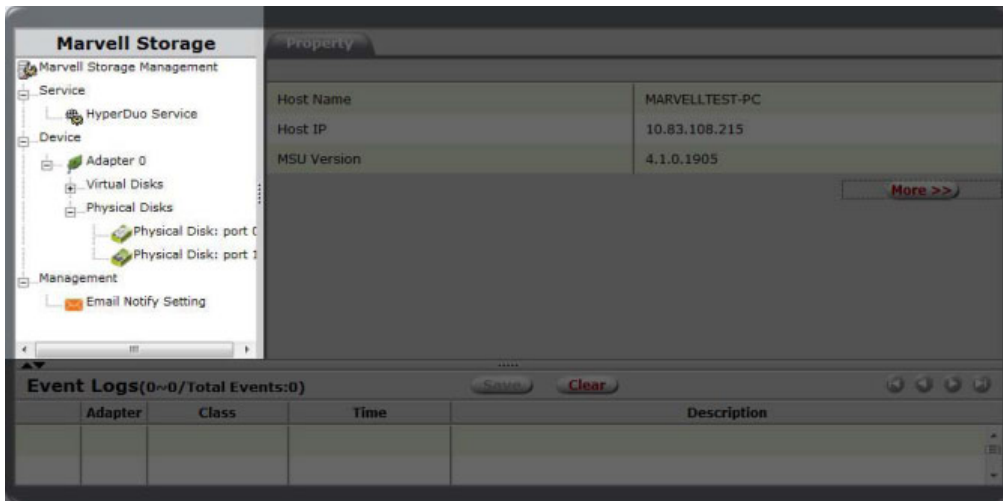
8.4.2 – Properties

As shown in Figure 2-17, the Properties pane lists the properties of the device selected in the System pane. The Properties pane contains tabs at the top. Depending on the device selected in the System pane, one of more of the following tabs appear:

- **Property**
  Select Property to view/modify the properties of the device selected in the System pane.
- **Operation**
  Roll-over the Operation tab to view a menu of operations that can be performed on the device selected in the System pane.
- **Programs**
  This tab allows you to configure the virtual disk.
- **Schedule**
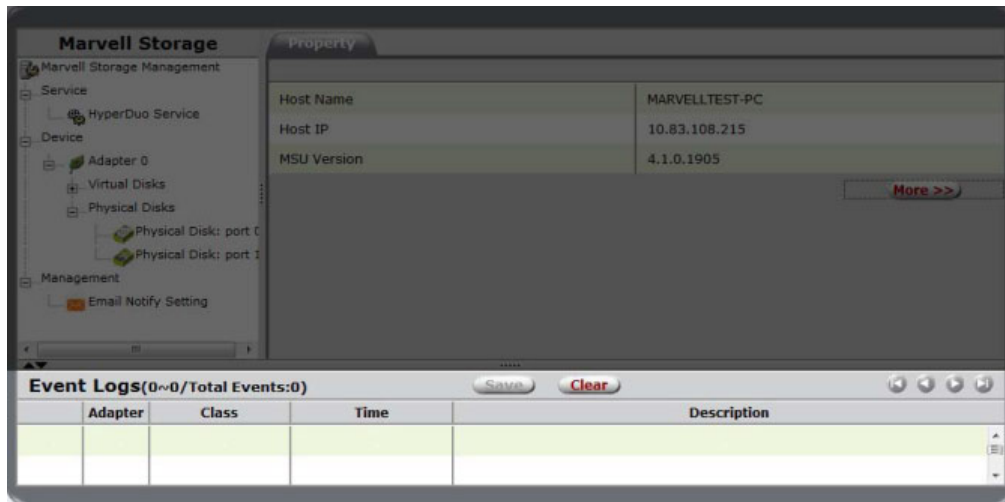 This tab allows you to schedule regular maintenance tasks.

Figure 2-17 Properties Pane
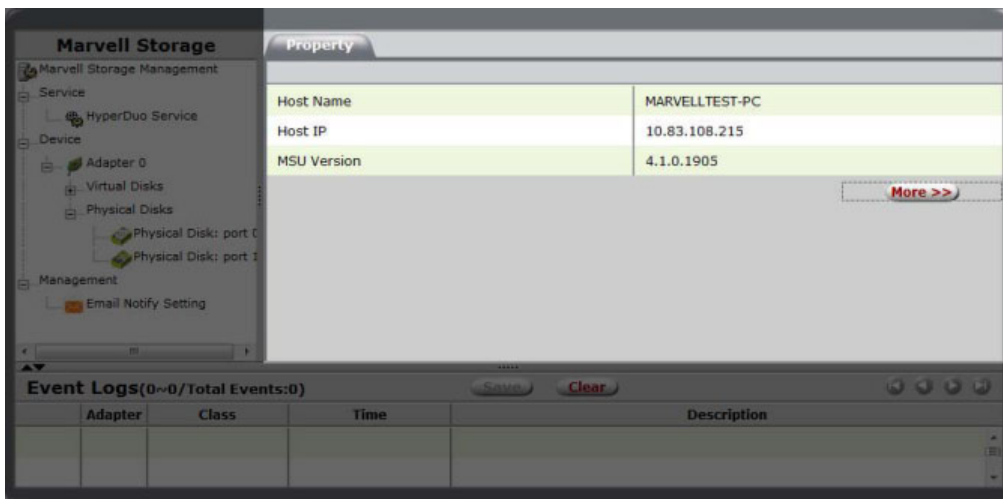
8.4.3 - Event Logs

As shown in Figure 2-18, the Events Logs pane lists adapter events. The events are categorized into informational, warning, and error events.

Figure 2-18 Event Logs Pane

2.7 Logout

Select **Logout**, as shown in Figure 2-19, to logout of MSU.

Figure 2-19 MSU Logout

*Note: To exit MSU, right-click the Tray Application, and select **Exit MS***

9 - MSU: Creating Hybrid Drives

This section describes the procedure to quickly create a Hybrid Drive that is optimized for either read/write performance or fault tolerance (reliability).

Note: A Hybrid Drive must contain one HDD and one SSD.

To quickly create Hybrid Drive optimized for performance/reliability
1. Click the Adapter from the left-hand portion of the interface.
2. Mouse-over the **Operation** tab and select **Create HyperDuo**, as shown in Figure 4-1.
The **Create HyperDuo** screen appears, as shown in Figure 4-2.

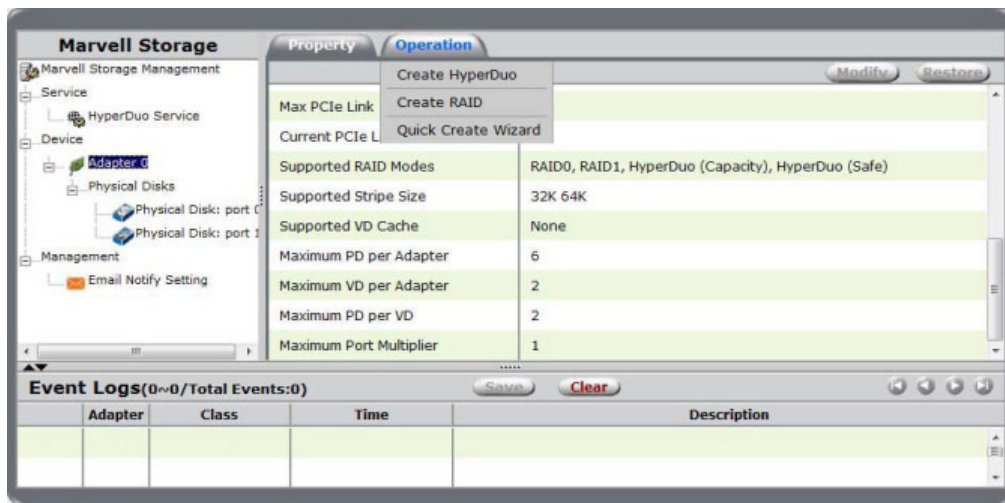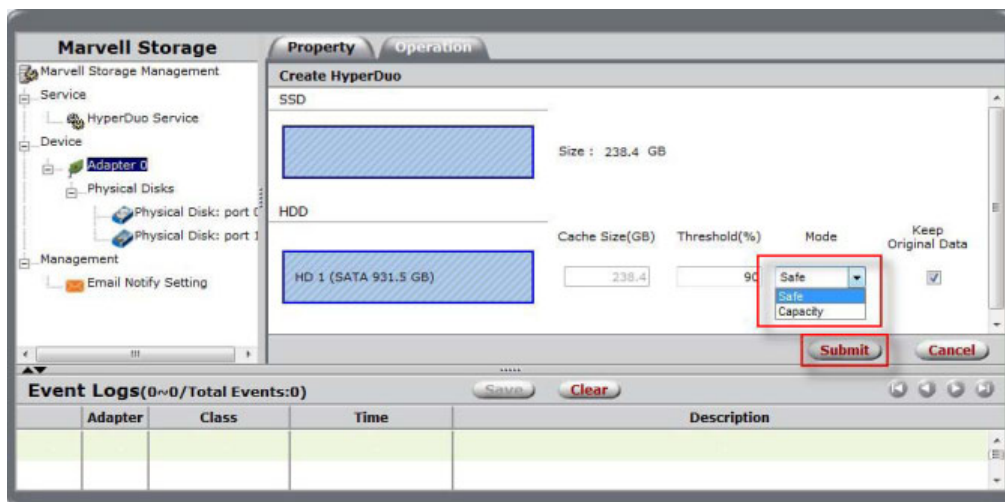**Figure 4-1 Create Hybrid Drive (HyperDuo)**

**Figure 4-2 Create Hybrid Drive (HyperDuo) Screen**

3. As shown in Figure 4-2, select one of the following options:

- **Safe** mode creates a Hybrid Drive that is optimized for fault tolerance. It is safe to use with hard drives that contain existing data.

- **Capacity** mode creates a Hybrid Drive that is optimized for read and write performance.
  Note: Capacity mode is a data-destructive process. Please back up all data before using capacity mode.

4. MSU displays the **Property** tab for the Hybrid Drive (listed as HyperDuo virtual disk) and begins initialization, as shown in Figure 4-3. This can take up to 30 minutes to complete.

Figure 4-3 Initialization
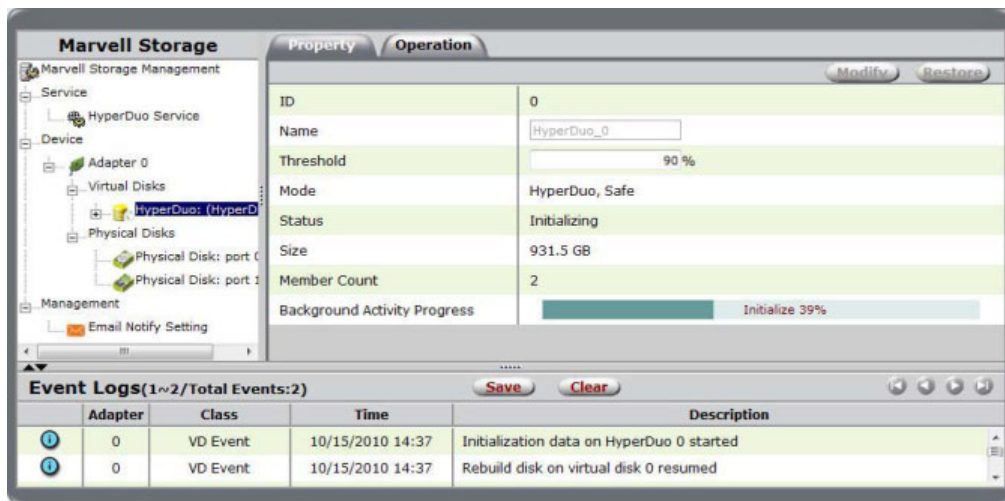
10 – MSU: Managing Hybrid Drives

This section describes procedures for customizing your Hybrid Drive. The interface will label your hybrid drive as a HyperDuo virtual disk.

10.1 –Selecting and Adding folders for Optimization:

1. Select **HyperDuo Service**.
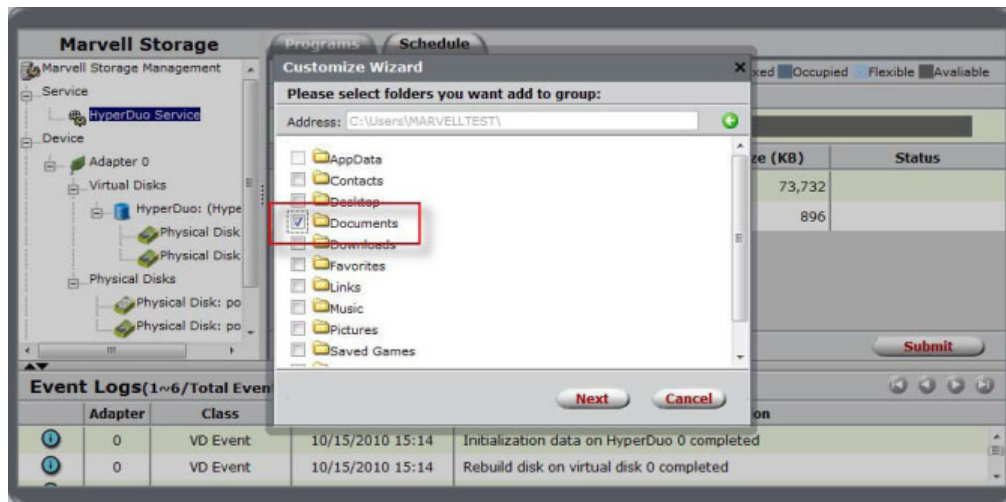
2. Select **Advanced**.
The **Customize Wizard** window will appear, as shown in Figure 4-4.

3. Check folders to add them, as shown in Figure 4-4.

4. Review the folders. Select the red X beside a folder or file to remove it.

5. Select **Submit** to save settings.
Figure 4-4 Customize Wizard

10.2 - Changing the method of Optimization

**1.** Select **HyperDuo Service**.

2. Check folders or programs, as shown in Figure 4-5.
- Check **Auto** to have the MSU manage the optimization of a folder or program automatically.
- Check **Cache** to manually select a folder or program for optimization.
- Check neither to specify that a folder or program should never be optimized.

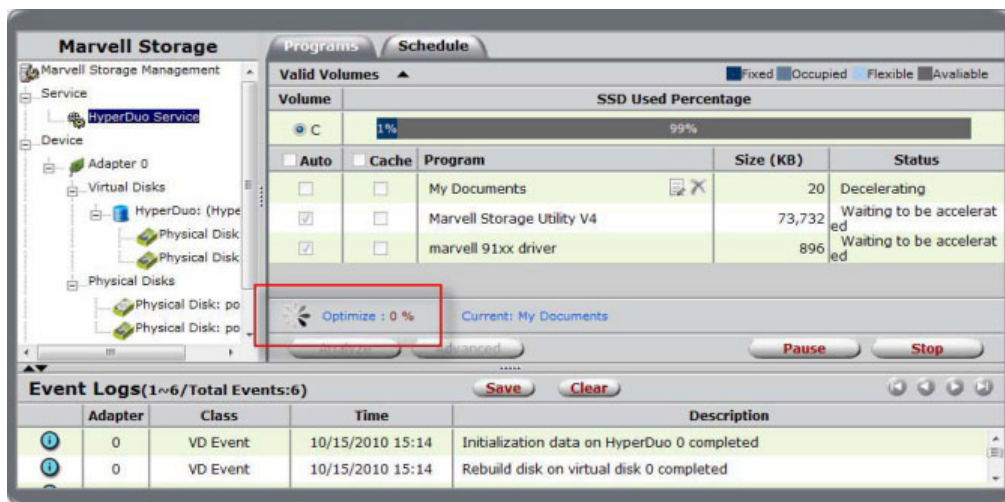**4.** Select **Submit** to commit changes, as shown in Figure 4-5.

Figure 4-5 Check Methods of Optimization
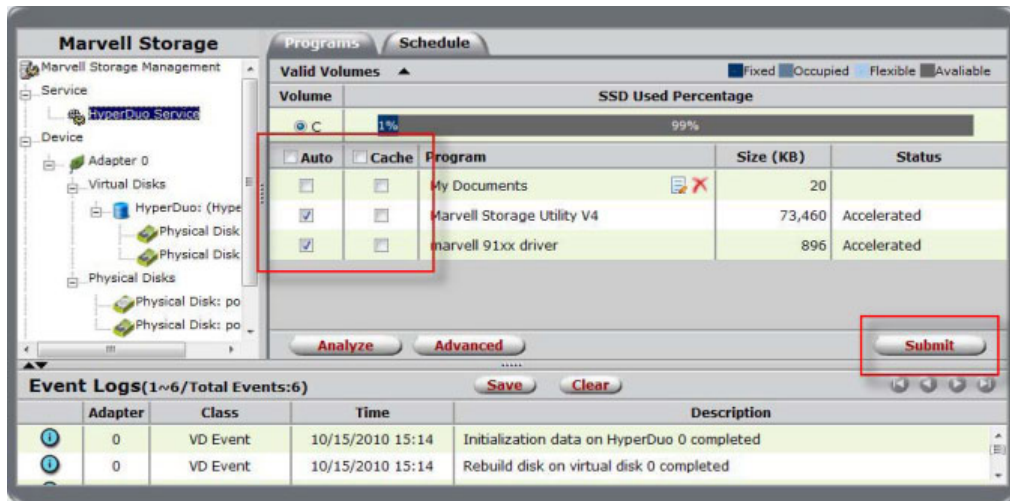
4. Select **OK** in the pop-up that follows. MSU begins optimization, as shown in Figure 4-6.

Figure 4-6 Optimization in Progress

11 – MSU: Monitoring Hybrid Drives

This section describes monitoring options for Hybrid disks, including Event Notification and alarms.

11.1 - Receiving Email Event Notifications
This section describes the procedure to configure MSU to send event notifications to a user's email account.
Note: This requires a working SMTP email server.

To configure email event notifications

1. Select **Email Notify Setting**, as shown in Figure 4-7.

2. Configure the email server settings and select **Test setting**, as shown in Figure 4-7.
MSU sends a test email to the configured email address. If the test email is received, the settings are working correctly.

4. Select **Submit** to save settings. MSU confirms changes with the message **Setting updated successfully!**

Figure 4-7 Email Notify Setting

11.2 - Viewing Events using Windows Event Viewer

Note: Because adapter events are triggered by the Windows driver, MSU events can also be viewed in the Windows Event Viewer.

To view events in the Windows Event Viewer

1. From the **Start** menu, right-click **My Computer** (in XP or 2003) or **Computer** (in Vista, 2008,or 7) and select **Manage**.

The **Computer Management** utility appears, as shown in Figure 4-8.

3. Browse to **System Tools >Event Viewer > Windows Logs > System** (in Vista, 2008, or 7) to view all
    system events including those of MSU, as shown in Figure 4-8.

Figure 4-8 Event Viewer (Windows 7, 8/8.1, 10)
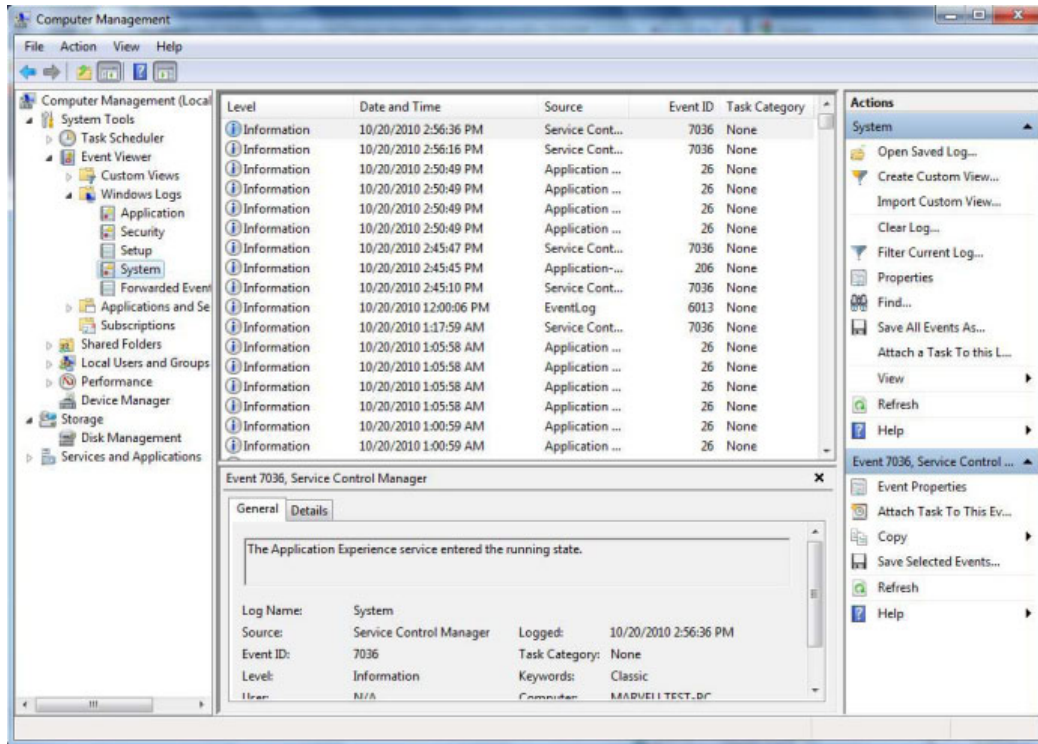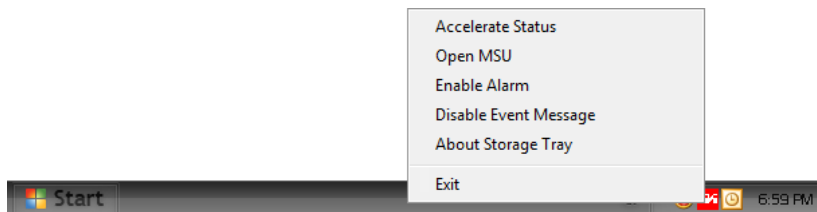

11.3 - Enabling the Alarm for Critical Events

MSU can play an audible alarm when critical events (warning and error) occur. When a hardware buzzer is
present, the buzzer is also sounded. The audible alarm is disabled by default. the alarm can be enabled or
disabled using the Tray Application, as shown in Figure 4-9.

Figure 4-9 Enabling Alarm using Tray Application

12 - Deleting Hybrid Drives

This section describes the procedure for deleting a Hybrid Drive.
Note: After deleting a Hybrid Drive, the physical disks constituting the Hybrid Drive become available for use in other Hybrid Drives.

To delete a Hybrid Drive

1. Select **HyperDuo** from the **Virtual Disks** menu under **Adapter**.
The **Property** tab for the HyperDuo virtual disk appears.

2. Mouse-over the **Operation** tab and select **Delete**, as shown in Figure 4-10.

Figure 4-10 Delete
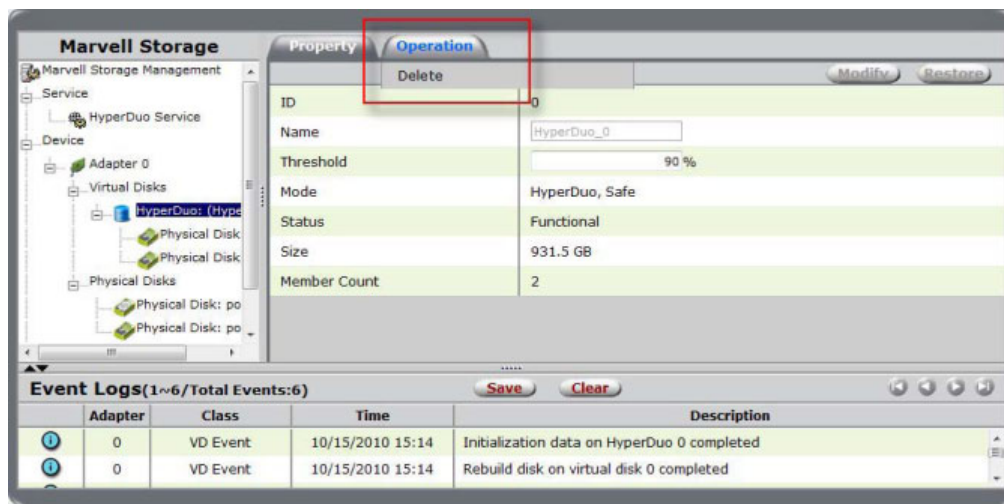
3. MSU requests confirmation of deletion with a pop-up message: **Are you sure you want to delete this HyperDuo?**

Select **OK** to confirm deletion.

4. MSU displays a pop-up message asking **Do you want to delete the partition information if this has one?**

Select **OK** to delete partition information or **Cancel** to keep it.

Thank You

Thank you for purchasing the Rocket 620AP SATA 6Gb/s Host adapter. We appreciate your support,

and welcome any questions, comments or product suggestions you may have.

Technical Support

For Technical and Customer Support related inquiries, please visit http://www.highpoint-tech.com/websupport/

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FCC Part 15 Class B Radio Frequency Interference statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
  Modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment under FCC rules.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

European Union Compliance Statement

This Information Technologies Equipment has been tested and found to comply with the following European directives:

- European Standard EN55022 (1998) Class B
- European Standard EN55024 (1998)