

240 Virtual Drive Feature Limitations and Known Issues

Addendum

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For a comprehensive list of changes to this document, see the [Revision History](#).

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240 Virtual Drive Feature Limitations and Known Issues Addendum

This document provides information about limitations and known issues for the 240 virtual drives (VDs) feature in the MegaRAID® 6Gb/s SAS RAID controller and the MegaRAID 12Gb/s SAS RAID controller.

1 Host Software Utility Support

The following table describes the Host Software Utility support matrix for the MegaRAID 6Gb/s SAS RAID controllers and MegaRAID 12Gb/s SAS RAID controllers.

Table 1 Host Software Utilities Support Matrix

MegaRAID 6 Gb/s SAS RAID Utilities	0–63 VD Target ID's Support	240 VD Target ID's Support
StorCLI	Yes	Yes
MegaRAID Storage Manager™	Yes	No
SNMP	Yes	No
Providers	Yes	No
Human Interface Infrastructure (HII)	Yes	Yes
Preboot Utilities: MegaRAID 6Gb/s SAS RAID Controller: WebBIOS MegaRAID 12Gb/s SAS RAID Controller: Ctrl-R	Yes	Yes
StoreLib/StoreLib Test	Yes	Yes
StoreLib/StoreLib Test (OOB)	Yes	Yes
Legacy BIOS	Yes	Yes NOTE The Option ROM builds INT 13H for the boot VD, which is followed by INT 13H for the first 63 VDs reported in the VD list.

2 Operating System Driver Support

The following table describes the operating system (OS) driver support matrix for the MegaRAID 6Gb/s SAS RAID controller and the MegaRAID 12Gb/s SAS RAID controller.

Table 2 OS Driver Support Matrix

OS Driver	Less than or Equal to 64 VD Support	240 VD Support
Windows®	Yes	Yes
Linux®	Yes	Yes
VMware® (Native/Legacy)	Yes	Yes
Solaris®	Yes	Yes
FreeBSD®	Yes	Yes

3 Firmware Known Limitations

The following tables describe the firmware limitations for the MegaRAID 6Gb/s SAS RAID controller and the MegaRAID 12Gb/s SAS RAID controller.

Table 3 Firmware Limitations – MegaRAID 6Gb/s SAS RAID Controller

Firmware Feature	Limitation	Support
Downgrade	240 VDs to 64 VDs	There are known limitations. For more information, see: ■ Downgrading the Firmware from 240 VD Support to 64 VD Support ■ Downgrading the Firmware from 240 VD Support to 64 VD Support When the OS is on the VD
Downgrade for iMegaRAID™	240 VDs to 64 VDs	There are known limitations. See Downgrading the iMegaRAID Firmware from 240 VD Support to 64 VD Support When the OS is on the VD .
CacheCade®	None	No
PNP IDs	Supported for some customers only.	Supported for some customers only.
JBOD	None	No
Snapshot	None	No
Auto Enhance Import of Foreign Configuration	None	No
RAID Configuration	When the firmware is running in the 240 VD mode, a single physical drive, unsliced, and full size RAID 0 configurations is supported.	Yes
Reconstruction	None	No
Rebuild	None	No
Consistency Check	None	No
Background Initialization (BGI)	None	No

Table 4 Firmware Limitations – MegaRAID 12Gb/s SAS RAID Controller

Firmware Feature	Limitation	Support
Downgrade	240 VDs to 64 VDs	There are known limitations. For more information, see: ■ Downgrading the Firmware from 240 VD Support to 64 VD Support ■ Downgrading the Firmware from 240 VD Support to 64 VD Support When the OS is on the VD
Downgrade for iMegaRAID™	240 VDs to 64 VDs	There are known limitations. See Downgrading the iMegaRAID Firmware from 240 VD Support to 64 VD Support When the OS is on the VD .
CacheCade	None	No
PNP IDs	Supported for some customers only.	Supported for some customers only.
JBOD	When the Autoconfig bit is enabled, the JBOD takes precedence if the JBOD bit is enabled. NOTE It is recommended to have either the Autoconfig or the JBOD feature enabled and not both at the same time.	Yes

3.1 Downgrading the Firmware from 240 VD Support to 64 VD Support

NOTE Configurations that are created with more than 64 VDs cannot be imported when the firmware is downgraded to 64 VD support because of the disk data format (DDF) incompatibility. In addition, the NVRAM layout is incompatible between the firmware versions that support 64 VDs and 240 VDs.

Perform the following steps to downgrade the firmware:

1. Delete VDs until no more than 64 VDs are configured.

NOTE If you want to import the VDs to another system that supports more than 64 VDs, the physical drives (PDs) must be removed before you delete the VDs.

2. Remove all of the physical drives and the SAS cables that are connected to the controller board.
3. Clear all of the existing configurations.
4. Downgrade the firmware.
5. Restart the system.
6. Reset the default factory settings.
7. Reconnect all of the physical drives and the SAS cables to the controller board.
8. Import the configurations.

3.2 Downgrading the Firmware from 240 VD Support to 64 VD Support When the OS is on the VD

Perform the following steps to downgrade the firmware:

1. Delete VDs until no more than 64 VDs are configured.

NOTE If you want to import the VDs to another system that supports more than 64 VDs, the physical drives (PDs) must be removed before you delete the VDs.

1. Stop all of the I/Os and shut down the system.
2. Remove all of the physical drives and the SAS cables that are connected to the controller board.
3. Start the relevant Preboot utility and clear all of the existing configurations.
4. Downgrade the firmware using the DOS® CLI.
5. Restart the system.
6. Reset the default factory settings using the DOS CLI.
7. Reconnect all of the physical drives and the SAS cables to the controller board.
8. Restart the system.
9. Import the configurations in the relevant Preboot utility. If the auto import feature is enabled, the configurations are automatically imported.

3.3 Downgrading the iMegaRAID Firmware from 240 VD Support to 64 VD Support When the OS is on the VD

Perform the following steps to downgrade the firmware:

1. Stop all of the I/Os and shut down the system.
2. Remove all of the physical drives and the SAS cables that are connected to the controller board.
3. Start the relevant Preboot utility and clear all of the existing configurations.
4. Downgrade the firmware using the DOS CLI.
5. Restart the system.
6. Reset the default factory settings using the DOS CLI.
7. Reconnect all of the physical drives and the SAS cables to the controller board.
8. Restart the system.
9. Import the configurations in the relevant Preboot utility. If the auto import feature is enabled, the configurations are automatically imported.

4 Drivers' Known Limitations

No limitations.

NOTE For the 240 VD feature to work, both the driver and the firmware must support the 240 VD feature. Otherwise, the driver exposes only the first 64 VDs.

5 BIOS Known Limitations

The Legacy Option ROM displays only the first 64 VD's during the power-on self-test (POST). The following example describes the POST behavior when there are 90 VD's in the configuration.

Example:

- The Option ROM displays the first 64 VD's in the POST.
- 90 VD's are found on the host adapter.
- 64 VD's are handled by the BIOS.

6 Revision History

6.1 Version 1.0, March 2015

Initial document release.

