

# Virtual Storage Device Emulator

## Release Notes

### Version 1.3

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## 1. Introduction

The release of Virtual Storage Device Emulator version 1.3 is targeted for the following goals and objectives:

- Emulation of Processor and Multi-media (CD/DVD/BD) devices.
- Command line interface (CLI) support.
- Rework of graphical user interface (GUI) of management console.
- SCSI parallel interface (SPI) support.

## 2. New features

- Support of SCSI Parallel Interface. SCSI parallel interface is supported for LSI Logic SCSI host adapters or adapters from the other manufacturers that are based on supported LSI53C8xx SCSI controllers.
- Emulation of processor device. Virtual Storage Device Emulator emulates the processor devices according to SCSI Primary Commands – 2 (SPC-2) standard.
- Emulation of multi-media device (CD/DVD/BD disk drive). Virtual Storage Device Emulator emulates the Multi-Media (CD/DVD/BD) devices according to Multi-Media Commands (MMC) standard.
- Command line user interface (CLI) support. Command line interface can be invoked either manually or by the other application or script.

- Support of Control (0Ah) mode page for all device types.
- Support of Read-Write Error Recovery (01h) for direct access and optical memory devices.
- Release (6) (17h) command support for all device types.
- Release (10) (57h) command support for all device types.
- Reserve (6) (16h) command support for all device types.
- Reserve (10) (56h) command support for all device types.
- Read (16) (88h) command support for sequential access (tape) devices.
- Write (16) (8Ah) command support for sequential access (tape) devices.
- Write Filemarks (16) (80h) command support for sequential access (tape) devices.
- Space (16) (91h) command support for sequential access (tape) devices.
- Emulation of read SCSI error for sequential access (tape drive) device.
- Emulation of read SCSI error for multi-media (CD/DVD/BD) device.
- Emulation of move medium SCSI error for media changer (jukebox) device.
- Device temperature emulation.
- Emulation of opening and closing of import/export door for media changer device.
- Emulation of operation timing for media changer device.
- Device extension modules. Device extension module handles non-standard commands, parameters, and behavior that are specific to certain device models.

### 3. Improvements

- Partition number parameter is added to tape read/write SCSI error emulation.
- Number of supported partitions for sequential access device is increased to 4.
- Re-design of graphical user interface of management console.
- Individual selection of virtual hardware objects in pseudo SCSI analyzer. Hardware object selection is located on navigation panel on Analyzer tab.
- Individual event selection in pseudo SCSI analyzer. Separate event lists for interface and core (targets and logical units) objects.
- Indication of prevented medium removal condition in logical unit properties.
- Indication of reservation status in logical unit properties.

- Showing more virtual medium information in media view and changer media properties.
- Maximum transfer length is increased to 2 MiB for Virtual Storage Controller.
- Dynamic logical unit configuration changes when target is connected to Virtual Storage Controller. When new logical unit is added or existing logical unit is enabled/disabled/removed the virtual hardware configuration visible through Virtual Storage Controller is updated immediately.

#### 4. Fixes

- Data file location and capacity fields in advanced logical unit properties dialog box are always hidden for optical memory device. The optical memory device can be configured with only removable medium.
- Direct access device with removable medium and optical memory device reported incorrect value for medium capacity.
- Updating send data length for Log Sense (4Dh) command according to allocation length limitation.
- When number of storage elements is increased, new elements become inaccessible (Access bit is reported as zero). Core service or computer restart is necessary to correct element accessibility state.

#### 5. Known problems

- When core service is terminated due to some reasons the Virtual Storage Controller and SCSI parallel interfaces do not update the list of visible devices. Any attempt to execute SCSI command for those devices may result in operating system or application client hanging. It is necessary to restart the computer by any means.
- Some configuration changes made through command line interface are not visible in management console. Refresh action does not show the changes. The following changes in configuration are affected: adding new target, removing existing target, adding new logical unit, removing existing logical unit. It is necessary to restart management console in order to see the changed hardware configuration in management console.
- If core service is restarted while management console is running the management console loses connection to core service and is no longer able to perform management communications. It is necessary to restart management console to restore connection to core service.