

Release Notes

Device Mapper Multipath Enablement Kit for HP StorageWorks Disk Arrays

Version 4.0.0

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Overview

This release notes discusses the most recent product information about HP Device Mapper Multipath (HPDM Multipath) Enablement Kit for HP StorageWorks Disk Arrays Version 4.0.0 software. HPDM Multipath software kit is an HP released Device Mapper multipath binary, based on Device Mapper Multipath included in Linux OS distributions, with enablement for HP StorageWorks Disk Arrays. Device Mapper is an infrastructure in the Linux kernel. It provides a generic way to create virtual layers of block devices. It supports striping, mirroring, snapshots, concatenation, and multipathing. The multipath feature is provided with combination of DM Multipath kernel modules and multipath-tools user-space package.

HPDM Multipath offers the following features:

- Detects path failure and automatically reroutes (failover) I/O to an available alternate path, if an existing connection fails
- Provides an option to perform failback of the LUN to the repaired paths
- Implements failover or failback actions transparently without disrupting applications
- Monitors each path and notifies if the path status changes
- Facilitates I/O load balancing among the multiple paths
- Provides CLI with display options to configure and manage Multipath features
- Provides an option to customize names for the HPDM Multipath devices
- Provides device name persistence across reboots and/or SAN changes
- Provides policy-based path grouping for the user to customize the I/O flow through specific set of paths
- Provides online LUN addition and deletion support

What's New

HPDM Multipath provides the following additional features as part of 4.0.0 version:

- Provides support for RHEL4.5/RHEL 4.6/RHEL 5.1/SLES 9 SP4/SLES10 SP1 along with RHEL5/SLES9 SP3/SLES10 OS distributions
- Provides support for the HP StorageWorks EVA4400 Disk Arrays
- Provides support for HP StorageWorks MSA1000/1500 Disk Arrays
- Provides support for HP StorageWorks MSA2000 Product family Disk Arrays (MSA2012fc/MSA2212fc/MSA2012i)
- Provides support for XP20000 / 24000 Disk Arrays
- Provides support for EVA iSCSI devices on RHEL5/RHEL5.1/SLES9 SP3/SLES9SP4/SLES10/SLES10 SP1

Documentation Updates

The first page of this release notes document contains the following identifying information:

- Version number, which indicates the software version.
- Date of Publication, which changes each time the document is updated.

Installation Notes

Installation instructions for the HP Device Mapper Multipath are documented in the *installation and reference guide for HP Device Mapper Multipath Enablement Kit for HP StorageWorks Disk Arrays* provided in Adobe Acrobat (.pdf) format.



NOTE:

To view files in PDF format (*.pdf), Adobe Acrobat Reader must be installed on your system. To download Adobe Acrobat Reader, visit the Adobe web site at:

<http://www.adobe.com>

Known Issues

Following are the known issues of the HPDM Multipath 4.0.0:

- In SLES OS, the `ioctl`s support is not available on a multipath device created by Device Mapper. As a result, operations such as SCSI inquiry are not supported with HPDM Multipath devices.
- In RHEL4 and SLES9 hosts, device reset can occur. However does not impact device availability other than a possible I/O delay. Device reset occurs only during a path failure.
- Paths to the LUNs may go to FAILED state during the LUN transition from one controller to the other. These paths would be recovered after the polling interval set.
- HP DM Multipath does not provide auto failback feature for the devices presented through iSCSI initiators. It is recommended to run the following commands to recover the failed paths and make them available for IO failback:

```
# /etc/init.d/iscsi restart or # /etc/init.d/open-iscsi restart  
# /sbin/multipath -v3
```
- On hosts running SLES OS, system may hang during reboot, if device mapper multipath are configured on iSCSI devices. To overcome this problem, it is recommended to run the following command before system reboot:

```
# /sbin/multipath -F
```
- Multipath commands may take longer time to execute on heavily loaded servers.

Support

Telephone numbers for worldwide technical support are listed on the HP support website:

<http://www.hp.com/support/>

Collect the following information before calling:

- Technical support registration number (if applicable)
- Product serial numbers
- Product model names and numbers
- Applicable error messages
- Operating system type and revision level
- Detailed, specific questions

For continuous quality improvement, calls may be recorded or monitored.

HP recommends that customers sign up online using the Subscriber's choice website:

<http://www.hp.com/go/e-updates>

- Subscribing to this service provides you with e-mail updates on the latest product enhancements, newer versions of drivers, and firmware documentation updates as well as instant access to numerous other product resources.
- After signing up, you can locate your products by selecting **Business support** and then **Storage** under Product Category.