



Release Notes

Mellanox Firmware Tools (MFT) Release Notes for VMware ESX Server 3.5

Rev 2.5.0vmware

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Mellanox Firmware Update Tools (MFT) for VMware ESX Server 3.5 Release Notes

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1 Overview

These are the release notes for Rev 2.5.0vmware of the **Mellanox Firmware Tools (MFT)** package for VMware ESX Server 3.5. The release notes include:

- This “Overview” section which includes the subsections:
 - “Package Tools” on page 3
 - “Software Dependencies” on page 4
- “Changes and New Features” on page 4
 - “Deprecated Features” on page 4
- “Known Issues” on page 5
- “Bug Fixes” on page 5

1.1 Package Tools

The package contains the *mlxburn* tool, which provides the following functions:

- Generation of a standard or customized Mellanox firmware image for burning—in .bin (binary) or .img format
- Burning an image to the Flash/EEPROM attached to a Mellanox HCA or switch device
- Querying the firmware version loaded on an HCA board

The package also contains the following tools (installed as part of the package), but they are *not* supported in this MFT for VMware release.

flint	This tool burns a firmware <i>binary</i> image to the Flash(es) attached to an HCA board. It includes query functions to the burnt firmware image and to the binary image file.
spark	This tool burns a firmware <i>binary</i> image to the EEPROM(s) attached to a switch device. It includes query functions to the burnt firmware image and to the binary image file. The tool accesses the EEPROM and/or switch device via an I2C-compatible interface or via vendor-specific MADs over the InfiniBand fabric (In-Band tool).
ibspark	This tool burns a firmware <i>binary</i> image to the EEPROM(s) attached to a switch device. It includes query functions to the burnt firmware image and to the binary image file. The tool accesses the switch device and the EEPROM via vendor-specific MADs over the InfiniBand fabric (In-Band tool).

Debug utilities A set of debug utilities (e.g., itrace, mstdump, isw, and i2c)

Detailed installation instructions along with complete descriptions of the various tools in the package can be found in the *Mellanox Firmware Tools User's Manual, Document no. 2329, Rev 1.01* or later.

1.2 Software Dependencies

Table 1 - MFT Software Dependencies

Software Package	Required Version
OFED's <i>mstflint</i> RPM ¹	OFED 1.1 or later

1. OFED's *mstflint* RPM can be downloaded from http://www.mellanox.com/products/management_tools.php.

2 Changes and New Features

Table 2 - Changes and New Features

Component / Tool	Description
mlxburn	<p>Added Mellanox InfiniScale IV switch support.</p> <p>NOTE: Use the <i>mlxburn</i> tool to burn InfiniScale IV switches. This is unlike the earlier generations switches (InfiniScale and InfiniScale III) that are burnt using the <i>spark</i> tool. The difference stems from the fact that the InfiniScale IV uses a Flash device to store the firmware image (which is handled by <i>flint</i> or <i>mlxburn</i>), whereas the older switch devices use an EEPROM for the firmware image (which is handled by <i>spark</i> or <i>mlxburn</i>).</p>
	Added the '-ul' flag which allows for PCI user level access to Mellanox HCAs.

2.1 Deprecated Features

Figure 3, "Deprecated Features" lists tools and/or flags that will not be supported starting on the next MFT release.

Table 3 - Deprecated Features

Component / Tool	Description
mlxburn	The following flags are deprecated: <i>-psid</i> , <i>-vsd1</i> , and <i>-vsd2</i> . These flags will not be supported in the next release.

3 Bug Fixes

Table 4 lists the bugs fixed in this release.

Table 4 - Fixed Bugs List

	Component / Tool	Issue	Description
1.	mlxburn	Bad firmware version detection	When burning a new image, flint/mlxburn may issue a false-warning that the new image is older than current

4 Known Issues

Table provides a list of known bugs and limitations in regards to this release of the Mellanox Firmware Tools.

Table 5 - Known Bugs and Limitations

	Tool	Issue	Description	Workaround	To be Fixed on
1.	General	Only mlxburn is supported in this release	Other tools are installed as part of the package but are not supported in this release		Next release
2.	mlxburn	Unsupported flags	<ul style="list-style-type: none"> Switch system options are not supported i2c options are not supported -inband -vpd 		
3.		Locked HCA Flash semaphore when IB driver is down	When burning firmware while the InfiniBand driver is down, the following error message may be displayed: *** ERROR *** Can not open /dev/mst/mt25418_pci_cr0: Can not obtain Flash semaphore (63). You can run "mstflint -clear_semaphore -d <device>" to force semaphore unlock. See help for details.	<ol style="list-style-type: none"> Burn fw while the IB driver is up Run: "mstflint \-clear_semaphore \-d <device>" to unlock the Flash semaphore, and reburn 	
4.		Bad exit status on successful query operation	When running mlxburn with a -query flag, it may return an exit value of 1 for a successful operation.		Next release

