



Release Notes

MST

Rev 4.0.3

Mellanox Technologies

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MST Release Notes

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1 Overview

MST (Mellanox Software Tools) is a unified package which enables the installation of one, two, or all three of the tool kits: hMST, isMST, and is3MST.

Note: The tools in this package are not intended for use if MST is part of the *Mellanox IB Gold Distribution* software package. Please use the tools of *IBADM Package* instead.

The following table lists for each tool kit the Mellanox device(s) it is intended for.

Table 1 - Classification of Tool Kits With Respect to Mellanox Devices

Tool Kit	Mellanox Silicon Devices
hMST	InfiniHost MT23108 InfiniHost III Ex MT25208 InfiniHost III Lx MT25204
isMST	InfiniScale MT43132
is3MST	InfiniScale III MT47396

1.1 Supported Platforms And Operating Systems

Table 2 on page 4 lists all supported platforms and operating systems by the tools included in this MST package.

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Table 2 - Supported Platforms and Operating Systems

Platform	Operating System	Kernel
X86	Red Hat Enterprise Linux AS 3.0	2.4.21-20.ELsmp
	Red Hat Linux 9.0	kernel.org: 2.4.27 (smp)
	Red Hat Linux 9.0	2.4.20-8 (smp; bigmem)
	SuSe SLES 9.0	Update (2.6.5-7.111.xx-smp)
	SuSE Linux 9.1 Pro	2.6.9 / 2.6.10
	SuSE Linux 9.1 Pro	Update (2.6.5-7.111.xx-smp)
	Rocks 3.3.0	2.4.21-20.ELsmp
	Fedora Core 3	vanilla 2.6.9 (from kernel.org)
IA-64	Red Hat Enterprise Linux AS 3.0	2.4.21-15.EL
	SuSE SLES 9.0	2.6.5-7.97-default
AMD64 (X86_64)	Red Hat Enterprise Linux AS 3.0	2.4.21-20.ELsmp
	SuSE SLES 9.0	2.6.5-7.111.xx-smp
	SuSE 9.1 Pro	Update (2.6.5-7.111.xx-smp)
	SuSE 9.1 Pro	2.6.9/2.6.10
	Rocks 3.3.0	2.4.21-20.ELsmp
	Fedora Core 3	2.6.9-1.667smp
Intel EM64T	Red Hat Enterprise Linux AS 3.0	2.4.21-20.EL
	SuSE SLES 9.0 RC5	2.6.5-7.97-smp / 2.6.5-7.111.xx-smp
	SuSE 9.1 Pro	2.6.10
	SuSE 9.1 Pro	Update (2.6.5-7.111.xx-smp)
	Rocks 3.3.0	2.4.21-20.ELsmp
	Fedora Core 3	2.6.9-1.667smp

1.2 MST Package Installation

The entire installation kit is provided in a single tar file which may be extracted using the following command:

```
tar -zxvf mst-<platform>-<version>.tgz
```

The MST Tools Installation Kit contains an installation script named *mst_install*, which prompts for the desired kit(s) to be installed. More than one tool kit may be specified in the response line, separated by spaces. If no kit is specified, all three kits will be installed.

The MST Tools Installation Kit also contains the following subdirectories:

hmst-<platform> - Installation kit for MT23108 and MT25208 tools

ismst-<platform> - Installation kit for MT21108 and MT43132 tools

is3mst-<platform> - Installation kit for MT47396 tools

Additionally, the following scripts serve to unify the initiation of applications from the various tools kits:

Table 3 - Initiation Scripts

Script	Operation
mvision	Prompts for chip type (MTxxx), then runs <i>infinivision</i> , <i>infinivisionEx</i> , <i>is3infinivision</i> , <i>adevmon</i> or <i>gdevmon</i> as applicable.
mburn	Prompts for chip type, then prompts for user interface type (GUI or command line). Choose command line to run <i>flint</i> or <i>eburn</i> . Otherwise the script runs <i>infiniburn</i> , <i>is3burn</i> , or <i>emt</i> as applicable
mtrace	Prompts for chip type, then runs <i>itrace</i> or <i>is3trace</i> as applicable.

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2 Changes from Previous Release (3.3.6)

2.1 hMST Changes

- hMST (starting from rev 3.3.0) no longer includes the **iq** and **fwver** utilities.

3 New Features and Tools

3.1 hMST New Features and Tools

This hMST revision supports Mellanox's Host Channel Adapter chips MT23108 InfiniHost, MT25208 InfiniHost III Ex, and MT25204 InfiniHost III Lx (with some limitations on **infiniburn** for the last device).

3.1.1 flint New Features

- PSID is no longer maintained while burning a new image even if it is different from the one currently on the board. **flint** notifies that the existing PSID is about to be overwritten with a different value, and prompts the user to approve the action.
- Added Intel's 28F320J3 Flash memory to the list of supported Flash devices.
- Can be used to burn a firmware image on the MT25204 InfiniHost III Lx device.

3.1.2 infiniburn New Features

- Mandatory board file selection: **infiniburn** now does *not* allow burning new firmware without specifically selecting the relevant board file.
- If the board file includes the PSID parameter and the firmware version used does not support PSID, **infiniburn** simply ignores the PSID parameter (rather than produce an error message).

3.2 is3MST

- This package supports both InfiniScale III device versions: MT47396A1-FCC and MT47396A1-FDC (the same functionality as the previous device, only with a substrate change).

4 Known Issues

4.1 MST Issues

- For machines running 2.6.x Linux kernels and using an MTUSB-1 (Dimax) device to communicate with the IB fabric, it is necessary to update the MTUSB-1 device firmware. Please contact your local Field Application Engineer for help. (For machines running 2.4.x kernels no such update is needed.)

4.2 hMST Issues

- **infiniburn** cannot be used to burn firmware on the MT25204 InfiniHost III Lx device.
- When **infiniburn** is used to burn an HCA with firmware version 3.2.2 or earlier for MT23108 InfiniHost, the Parameter-Set-ID (PSID) field will not be available and may be overwritten with zeros. To avoid overwriting the PSID, it is recommended to follow these steps:
 1. Use **infiniburn** to generate an image of the firmware to be burnt (see section 2.4.2, “Saving the Entire Image to File” in the *MST User’s Manual, Doc. no. 2125SM*).
 2. Use **flint** to burn the image you saved in step 1. **flint** preserves the PSID unless the ‘-psid’ option is used. See chapter 5, “Flint Utility” in the *MST User’s Manual, Doc. no. 2125SM*.

4.3 isMST Issues

- mread does not work with InfiniScale MT43132.

4.4 I²C Cable Connection During Device Power-On

- During power-on of a device such as MTEK43132 or MTS2400, the device uses the I²C bus to transfer its run-time program to its internal RAM. Since external signals on the I²C bus may disturb this process, it is required to disconnect the I²C cable from the device until the power-on process is complete.

5 Fixed Bugs

5.1 hMST Fixed Bugs

Table 4 - hMST Fixed Bugs

Issue/Bug	Description	Found in version	Fixed in version
flint did not allow assigning GUIDs w/o assigning VSD and PSID too		3.1.11	3.2.2

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