



Release Notes

InfiniBand Administration Tools (IBADM)

Rev 2.1.0

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InfiniBand Administration Tools (IBADM) Release Notes

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1 Overview

These are the release notes for Rev 2.1.0 of IBADM, a package of InfiniBand ADMINistration tools. The document includes the following sections:

- This “Overview” which includes the subsections:
 - “IBADM Tools” on page 3
 - “Firmware Supported” on page 4
 - “Software Dependencies” on page 4
 - “Supported Platforms and Operating Systems” on page 5
 - “Interfaces Used for Tool Access” on page 6
- “Changes and New Features” on page 6
- “Bug Fixes” on page 7
- “Known Issues” on page 8

1.1 Package Contents

- IBADM tools (see Section 1.1.1)
- MFT (Mellanox Firmware Tools) Rev 1.0.1 (see http://www.mellanox.com/support/firmware_table.php)
- Firmware package

1.1.1 IBADM Tools

Detailed installation instructions along with complete descriptions of the various tools in the package can be found in the *IBADM User's Manual, Rev. 1.40, Document no. 2130UM*. The following is a list of the available tools in the package, together with a brief description of what each tool performs.

ibls	Lists the available IB systems, devices, and cables in the IB Subnet
ibmon	Monitors all the devices and systems (for both IB and system related issues)
ibcon	Provides a view of some internal configuration registers of devices
ibfwmgr	Burns and tracks the IB devices firmware
ibtopogen	A cluster design tool for fat-tree topologies

1.2 Firmware Supported

Table 1 - Firmware Supported

Silicon Type	Required Firmware Version
MT23108 InfiniHost	fw-23108 ver. 3.2.0 or later
MT25204 InfiniHost III Lx	fw-25204 ver. 1.0.1 or later
MT25208 InfiniHost III Ex (InfiniHost mode)	fw-25208 ver. 4.5.2 or later
MT25208 InfiniHost III Ex (MemFree mode)	fw-25218 ver. 5.0.1 or later
MT43132 InfiniScale	fw-43132 ver. 5.2.0 or later
MT47396 InfiniScale III	fw-47396 ver. 0.3.2 or later

1.3 Software Dependencies

Table 2 - Software Dependencies

Software Package	Required Version
One of the following drivers: 1. “IB Gold Distribution” (IBGD Gen1) from http://www.mellanox.com 2. OFED stack available through OpenFabrics at http://www.openfabrics.org/downloads.html	Driver #1: 1.6.1 or later Driver #2: 1.0 or later
Transport Access Layer and IPoIB	1.6.1 or later
OpenSM	0.3.2 or later
Perl	5.6 or later
Expat	1.95 or later

1.4 Supported Platforms and Operating Systems

Table 3 lists all supported platforms and operating systems by the tools included in this IBADM package.

Table 3 - Supported Platforms and Operating Systems

Architecture	Operating System	Kernel
X86 , AMD64 (Opteron) , Intel EM64T , AMD64 PCI-EX	RedHat Enterprise Linux 4.0 up2	2.6.9-22.ELsmp
	RedHat Enterprise Linux 4.0 up3	2.6.9-34.ELsmp
	SLES 9 SP3	2.6.5-7.244-smp
	SLES 10 RC2	2.6.16.16-1.6-smp (or RC 2.5 2.6.16.14-6-smp)
	SLES 10 RC1	2.6.16.14-6-smp
	SuSE 10 Pro	2.6.13-15-smp
	Fedora Core 4	2.6.11-1.1369_FC4
	kernel.org	2.6.16.x

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1.5 Interfaces Used for Tool Access

The following table lists the interfaces used for tool access for Mellanox boards and systems. The table uses the following abbreviations:

IB	(In-Band)	Application runs over InfiniBand (ibfwmgr may use the IPoverIB functionality)
IP	(Out-of-Band)	Application runs over Ethernet
I2C	(Out-of-Band)	Application runs using I2C bus

Table 4 - Interfaces for Tools Access on Mellanox Boards and Systems

Tool	Board or System Support				
	HCA Cards: - InfiniHost PCI-X - InfiniHost III Ex PCI Express - InfiniHost III Lx PCI Express	96 Port Switch Based on the MT43132 InfiniScale switch	24 Port Switch Based on the MT47396 InfiniScale III switch	24 Port Managed Switch Based on the MT47396 InfiniScale III switch	144 Port Switch Based on the MT47396 InfiniScale III switch
ibls	IB / IP ¹	IB / IP	IB / I2C	IB / IP	IB / IP
ibmon / pm ²	IB / IP	IB / IP	IB / I2C	IB / IP	IB / IP
ibmon / bm ³	NA	IB / IP	IB / I2C	IB / IP	IB / IP
ibfwmgr	IP	IP	IB / I2C	IB / IP	IB / IP
ibcon	IB / IP	IB ⁴	IB / I2C	IB / IP	IB

1. IP may be native IP or IPoverIB
2. Performance check.
3. Baseboard check.
4. **ibcon** enables accessing an individual InfiniBand device (e.g., an MT43132 InfiniScale or MT47396 InfiniScale III device) within the system by its GUID, but not accessing the whole switch system.

2 Changes and New Features

- This version of IBADM now supports OFED, the OpenFabrics Enterprise Distribution SW stack - see <http://www.openfabrics.org/downloads.html>.
- Added a new configuration variable to 'ibadm.conf': Vendor Key (V_KEY). This variable enables authentication of In-Band firmware burning operations. See Chapter 5 of the *IBADM User's Manual, Rev. 1.40, Doc. # 2130UM*.
Note: See "Known Issues" on page 8 for limitations.
- Added support for the 144 4X InfiniBand DDR Switch platforms based on Mellanox Technologies MTPDK144 design kit
- Added option '-E <sym-err-thd>' to **ibmon**. This option defines the link symbol error threshold.
- Changes to the list of supported platforms and operating systems (see Table 3 on page 5)
- The IBADM installation process also installs a firmware package (by default under /etc/ibfw)

3 Bug Fixes

The following table lists the bugs that were fixed in this Rev 2.1.0 of IBADM.

Table 5 - Bug Fixes

	Issue	Details
1.	IBADM install/uninstall issues	Fixed

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4 Known Issues

The following table provides a list of known bugs and limitations in regards to this release of IBADM.

Table 6 - Known Bugs and Limitations

	Issue	Details
1.	The V_KEY feature is not supported on old HCA firmware versions	Current InfiniScale III switch firmware (fw-47396 rev 0.8.4) supports the V_KEY feature. For HCAs, the following firmware versions (or later) will support V_KEY: > fw-23108 (InfiniHost) ver. 3.5.000 > fw-25208 (InfiniHost III Ex in InfiniHost mode) ver. 4.7.700 > fw-25218 (MemFree InfiniHost III Ex) ver. 5.1.500 > fw-25204 (InfiniHost III Lx) ver. 1.1.000
2.	InfiniScale III firmware (fw-47396) supports a V_KEY up to 14 hexadecimal digits wide	Firmware fw-47396 ver. 0.8.5 will support up to 16 hexadecimal digits
3.	The -l and -L options of ibls do not display any output	ibls -l and ibls -L do not produce any output if Timeout value in /etc/ibadm.conf is too small. The user can raise the Timeout value to get output.
4.	ibfwmgr does not support the reset option	To be fixed in the next IBADM release
5.	LID re-assignment during an In-Band device burn may lead to firmware image corruption on devices in the cluster	If the SM re-assigns port LIDs while ibfwmgr is burning a device via InfiniBand (In-Band), the burn directives will be routed to the wrong device leading to the corruption of its firmware image. Workaround: Do not re-assign LIDs while ibfwmgr is running.
6.	Limited Baseboard-Management-Agent (BMA) access and support	Using ibmon to get BMA data is restricted to Out-Of-Band and for 24 port or 144 port switch systems based on the InfiniScale III device. It will be supported in the 3.0.0 release.
7.	Cannot run multiple sessions of ibmon on the same machine	An attempt to run a second ibmon on the same machine will fail.
8.	Switch SMA Port 0 is not reported in ibmon logs	The ibmon option for querying Switch SMA Port 0 is not functional
9.	Accessing a switch device undergoing an In-Band burn via the management port may cause the burn to fail	This scenario may cause a contention on the internal I2C-compatible bus. In some cases it may require the switch system to reboot. Workaround: Do not access a switch system via its management port when one of its devices is undergoing an In-Band burn operation
10.	IBADM cannot run on a machine with the tcldreadline package installed	Workaround: Uninstall the tcldreadline package
11.	IBADM cannot run on a machine with 2 HCA cards attached	To be fixed in next release
12.	ibfwmgr may report incorrect percentile progress while burning multiple MT47396 InfiniScale III switch devices	This may occur if a previous FW burn session was prematurely aborted. Note that this erroneous percentile reporting of progress does not have any real impact on the burning process itself. However, it may double the duration of burning.

	Issue	Details
13.	Issue with installing IBADM on OFED 1.0 using '--ibis' option	<p>If installing IBADM with option '--ibis' on a machine with OFED 1.0 installed in 'HPC' mode (InfiniBand modules and libraries, mpi and diagnostic tools), the installation fails and reports 2 missing library packages (libibumad-devel and libibcommon-devel).</p> <p>Workaround: Install OFED 1.0 in 'All packages' mode (all of openib, mpi).</p> <p>To be fixed in OFED release 1.0.1.</p>

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