



InfiniPath 2.1 Drivers and Software for All InfiniPath HCAs

This software license applies only to QLogic customers.
QLogic Corporation.
All rights reserved.

Table of Contents	
1.	Package Contents
2.	OS Support
3.	Switches
4.	Supported Compilers
5.	Supported Features
6.	Using InfiniPath Drivers and Software
6.1	Installation
7.	Additional Notes
8.	Contacting Support

1. Package Contents

The following lists describe the contents provided in the InfiniPath download. Note that each set of RPMs uses a build identifier (xxx) and a distribution identifier (yyy). The architecture is designated by x86_64, noarch, or i386, and is dependent upon the distribution.

InfiniPath RPMs

Filename	Description
Documentation RPMs	
infinipath-doc-2.1-xxx_yyy.noarch.rpm	InfiniPath man pages and other documents
mpi-doc-2.1-xxx_yyy.noarch.rpm	Man pages for MPI functions and other MPI documents
ofed-docs-2.1-xxx_1_1.yyy.x86_64.rpm	OpenFabrics documentation
InfiniPath Drivers, Source, and Library RPMs	
infinipath-2.1-xxx_yyy.x86_64.rpm	Utilities, source code, and InfiniPath configuration files
infinipath-kernel-2.1-xxx_yyy.x86_64.rpm	InfiniPath drivers, OpenFabrics kernel modules.
infinipath-libs-2.1-xxx_yyy.i386.rpm	InfiniPath protocol shared libraries for 32-bit and 64-bit systems
InfiniPath MPI RPMs	
mpi-benchmark-2.1-xxx_yyy.x86_64.rpm	MPI benchmark binaries
mpi-frontend-2.1-xxx_yyy.i386.rpm	MPI job launch scripts and binaries, including mpirun and MPD
mpi-libs-2.1-xxx_yyy.i386.rpm	Shared libraries for MPI
InfiniPath Development RPMs	
infinipath-devel-2.1-xxx_yyy.x86_64.rpm	Development files for InfiniPath
mpi-devel-2.1-xxx_yyy.noarch.rpm	Source code for the MPI development environment, including headers and libs, MPI examples, and benchmarks. Use these files to build the examples or rebuild the benchmarks.

OpenFabrics RPMs

Filename	Description
OpenFabrics Userspace Driver, Libraries, and Utilities	
dapl-2.1-xxx.1_2_1.yyy.x86_64.rpm	uDAPL support
dapl-utils-2.1-xxx.1_2_1.yyy.x86_64.rpm	uDAPL support
ibutils-2.1-xxx.1_2.yyy.x86_64.rpm	ibutils provides InfiniBand network and path diagnostics
ipoibtools-2.1-xxx.1_1.yyy.x86_64.rpm	IPoIB High Availability daemon
libcxgb3-2.1-xxx.1_0.yyy.x86_64.rpm	Support for the Chelsio 10GbE HCA
libibcm-2.1-xxx.1_0.yyy.x86_64.rpm	Along with the OpenFabrics kernel drivers, libibcm provides a userspace InfiniBand Connection Management API
libibcommon-2.1-xxx.1_0_2.yyy.x86_64.rpm	Common utility functions for the InfiniBand diagnostic and management tools. Required for OpenSM.
libibmad-2.1-xxx.1_0_4.yyy.x86_64.rpm	Low layer InfiniBand functions for use by the InfiniBand diagnostic and management programs. These programs include MAD, SA, SMP, and other basic InfiniBand functions. Required for OpenSM.
libibumad-2.1-xxx.1_0_4.yyy.x86_64.rpm	Provides the user MAD library functions, which sit on top of the user MAD modules in the kernel. These functions are used by the InfiniBand diagnostic and management tools, including OpenSM. Required for OpenSM.
libibverbs-2.1-xxx.1_1.yyy.x86_64.rpm	Library that allows userspace processes to use InfiniBand verbs as described in the InfiniBand Architecture Specification. This library includes direct hardware access for fast path operations. For this library to be useful, a device-specific plug-in module must be installed.
libibverbs-utils-2.1-xxx.1_1.yyy.x86_64.rpm	Useful libibverbs example programs such as ibv_devinfo, which display information about InfiniBand devices
libipathverbs-2.1-xxx.1_1.yyy.x86_64.rpm	Provides device-specific userspace driver for QLogic HCAs
libopensm-2.1-xxx.3_0_3.yyy.x86_64.rpm	libopensm provides the library for OpenSM. Used by OpenSM.
libosmcomp-2.1-xxx.3_0_3.yyy.x86_64.rpm	libosmcomp provides the OS component library for OpenSM. Used by OpenSM.
libosmvendor-2.1-xxx.3_0_3.yyy.x86_64.rpm	libosmvendor provides the vendor library for OpenSM. Used by OpenSM
librdmacm-2.1-xxx.1_0_1.yyy.x86_64.rpm	Support for the new connection manager
librdmacm-utils-2.1-xxx.1_0_1.yyy.x86_64.rpm	Utilities for the new connection manager
libsdp-2.1-xxx.1_1_99.yyy.x86_64.rpm	Can be LD_PRELOAD-ed to have a sockets application use: InfiniBand Sockets Direct Protocol (SDP) instead of TCP, transparently and without recompiling the application
ofed-scripts-2.1-xxx.1_2.yyy.x86_64.rpm	OpenFabrics scripts
openib-diags-2.1-xxx.1_2_6.yyy.x86_64.rpm	Useful programs for troubleshooting and checking the InfiniBand device state
rds-tools-2.1-xxx.1_0.yyy.x86_64.rpm	Supports RDS
rhel4-ofed-fixup-2.1-4082.772.rhel4_psc.noarch.rpm	Fixes conflicts with previously installed RedHat RHEL4 and RHEL5 packages
perftest-2.1-xxx.1_2.yyy.x86_64.rpm	InfiniBand performance tests
sdpnetstat-2.1-xxx.1_50.yyy.x86_64.rpm	
srptools-2.1-xxx.0_0_4.yyy.x86_64.rpm	Support for SRP

OpenFabrics Development	
libcxgb3-devel-2.1-xxx.1_0.yyy.x86_64.rpm	Development files to support the Chelsio 10GbE HCA
dapl-devel-2.0-xxx.1_2_1.yyy.x86_64.rpm	Development files for uDAPL support
libibcm-devel-2.1-xxx.1_0.yyy.x86_64.rpm	Development files for the libibcm library
libibcommon-devel-2.1-xxx.1_0_2.yyy.x86_64.rpm	Development files for the libibcommon library
libibmad-devel-2.1-xxx.1_0_4.yyy.x86_64.rpm	Development files for the libibmad library
libibumad-devel-2.1-xxx.1_0_4.yyy.x86_64.rpm	Development files for the libibumad library
libibverbs-devel-2.1-xxx.1_1.yyy.x86_64.rpm	Static libraries and header files for the libibverbs verbs library
libipathverbs-devel-2.1-xxx.1_1.yyy.x86_64.rpm	Static libraries and header files for the libibverbs verbs library
libmthca-devel-2.1-xxx.1_0_4.yyy.x86_64.rpm	Static version of libmthca that can be linked directly to an application, which is useful for debugging
libopensm-devel-2.1-xxx.3_0_3.yyy.x86_64.rpm	Static component libraries for OpenSM
libosmcomp-devel-2.1-xxx.3_0_3.yyy.x86_64.rpm	Static component libraries for OpenSM
libosmvendor-devel-2.1-xxx.3_0_3.yyy.x86_64.rpm	Static vendor libraries for OpenSM
librdmacm-devel-2.1-xxx.1_0_1.yyy.x86_64.rpm	Development files for the new connection manager

OpenSM RPM

Filename	Description
opensm-2.0-xxx.3_0_3.yyy.x86_64.rpm	Provides an implementation of an InfiniBand Subnet Manager and Administrator. At least one Subnet Manager per each InfiniBand subnet is required to initialize the InfiniBand hardware. Required for OpenSM.

Other HCAs RPMs

Filename	Description
libmthca-2.1-xxx.1_0_4.yyy.x86_64.rpm	Provides a device-specific userspace driver for Mellanox HCAs (MT23108 InfiniHost and MT25208 InfiniHost III Ex) for use with the libibverbs library NOTE: The mstflint-2.1-* and tvflash-2.1-* RPMs (firmware utilities for non-InfiniPath HCAs) are not available for this release.

Other MPIs RPMs

Filename	Description
mpi-selector-2.1-xxx.yyy.noarch.rpm	
mpitests_openmpi_gcc2.1-xxx.yyy.x86_64.rpm	
openmpi_gcc-2.1-xxx.yyy.x86_64.rpm	

2. OS Support

The InfiniPath 2.1 release has been tested on the following Linux distributions for AMD Opteron systems and Intel EM64T systems (x86_64).

Operating Systems		
OS Name	InfiniPath/OpenFabrics supported kernels	Hardware Platform
RedHat Fedora Core 4	2.6.17	x86_64
RedHat Fedora Core 5	2.6.19	x86_64
RedHat Fedora Core 6	2.6.20	x86_64
RedHat Enterprise Linux 4 (RHEL 4)	2.6.9-34(U3), 2.6.9-42(U4), 2.6.9-55(U5)	x86_64
RedHat Enterprise Linux 5 (RHEL 5)	2.6.18	x86_64
CentOS 4.3, 4.4, 4.5 (Rocks 4.3, 4.4, 4.5)	2.6.9-34, 2.6.9-42, 2.6.9-55	x86_64
Scientific Linux 4.3, 4.4, 4.5	2.6.9-34, 2.6.9-42, 2.6.9-55	x86_64
Scientific Linux 5.0	2.6.18	x86_64
SUSE Linux Enterprise Server10 (SLES 10-GM and SP1)	2.6.16	x86_64, ppc64

As of this release, the SUSE10 release series is no longer supported. Fedora Core 4 kernels prior to 2.6.17 are no longer supported. InfiniPath only works with 64-bit kernels; however, either 32-bit or 64-bit applications can be run with InfiniPath.

3. Switches

At least one switch in the cluster has to be a managed switch with subnet management enabled, or else OpenSM must be configured on at least one node in the fabric. The InfiniPath interconnect is designed to work with all InfiniBand-compliant switches.

4. Supported Compilers

Presently, in addition to the QLogic PathScale Compiler Suite, InfiniPath MPI supports a number of other compilers. InfiniPath MPI has been tested and is known to work with applications built using the following compilers:

Compiler Vendor	Versions
QLogic PathScale	2.0, 2.2, 2.3, 2.4, 2.5, 3.0
PGI	5.2, 6.0, 6.1
Intel	9.0, 9.1
GNU	gcc 3.3.x, gcc 3.4.x, gcc 4.x, gfortran

The listed compilers are supported only with InfiniPath on distributions already supported by the compiler vendor.

5. Supported Features

This version of InfiniPath software provides support for all InfiniPath HCAs, which includes the InfiniPath PCI Express board, the QLE7140, and the InfiniPath HyperTransport QHT7040 and QHT7140 HCAs. The InfiniPath HCAs and software are supported on Opteron and Intel x86_64 systems with HyperTransport HTX slots, and PCI Express x8 or x16 slots.

Included in this InfiniPath 2.1 software release are the following components:

- InfiniPath HCA driver
- InfiniPath Message Passing Interface (MPI)
- Standard networking over Ethernet emulation (TCP/IP, etc.)
- InfiniPath subnet management agent and associated utilities
- OpenFabrics for InfiniPath
- Expanded MPI scalability enhancements for PCI Express have been added. The QHT7040 and QHT7140 can support up to 4 processes per context for a total of 32 processes per InfiniPath HCA. The QLE7140 supports up to 4 processes per context, for a total of 16 processes per InfiniPath HCA.
- Support for multiple high-performance native PSM MPI implementations has been added. You can use a different version of MPI and achieve the same high-bandwidth and low-latency performance that is standard with InfiniPath MPI. The currently supported implementations are HP-MPI, Open MPI, MVAPICH, and Scali. MVAPICH support is new with this release. Open
- MPI provides MPI-2 functionality, including one-sided operations and dynamic processes.
NOTE: The pre-compiled Open MPI release 1.2.1 RPM is available as part of the OpenFabrics RPMs in the InfiniPath 2.1 release download.
- Also included is expanded operating system support, and support for the latest OpenFabrics software stack.
- Multiple InfiniPath HCAs per node are supported. A single software installation works for all the HCAs.
- In this release, SRP is provided as a technology preview. Add `ib_srp` to the module list in `/etc/sysconfig/infinipath` to have it automatically loaded. NOTE: SRP has been tested on LSI (Engenio) and Texas Memory Systems.
- InfiniPath MPI supports running exclusively in shared memory mode; no InfiniPath HCA is required for this mode of operation. This mode is for running applications on a single node rather than on a cluster of nodes.
- The `-distributed=on|off` option has been added to `mpirun`. This option enables `mpirun` to start processes in parallel on multiple nodes. Initially, `mpirun` spawns (from the root node) one `mpirun` child per node, each of which in turn spawns the number of local processes for that particular node. You can control the distributed `mpirun` job spawning mechanism with the following option:
`-distributed [=on|off]`
The default is on. If you want to change the default, put this option in the global `mpirun.defaults` file or a user-local file.
- Overall job performance has improved. Larger jobs should show improved performance and a reduction in performance variability.

6. Using InfiniPath Drivers and Software

6.1 Installation

Download the InfiniPath Install Guide from the Resource web page for the appropriate adapter model. Follow the detailed instructions for installing the InfiniPath HCAs and software.

7. Additional Notes

None

8. Contacting Support

Please feel free to contact your QLogic approved reseller or QLogic Technical Support at any phase of integration for assistance. QLogic Technical Support can be reached by the following methods:

Web: <http://support.qlogic.com>

North America Contact Information

Email: support@qlogic.com

Phone: (952) 932-4040

Support contact information for other regions of the world is available at the QLogic website:

<http://support.qlogic.com>

[Go to Top](#)



©Copyright 2006, 2007. All rights reserved worldwide. QLogic, the QLogic logo, the Powered by QLogic logo, PathScale, the PathScale logo, and InfiniPath are registered trademarks of QLogic Corporation. All other brand and product names are trademarks or registered trademarks of their respective owners.