OpenFabrics Enterprise Distribution Version 1.2.5

Mellanox Release Notes

Release summary:

The OpenFabrics Enterprise Distribution (OFED) version 1.2.5 software package supports InfiniBand and iWARP fabrics. It is composed of several software modules intended for use on a computer cluster constructed as an InfiniBand subnet or an iWARP network.

OFED 1.2.5 adds incremental support for new devices and features on top of the OFED 1.2 release. Support for the Mellanox fourth generation ConnectX InfiniBand Host Channel Adapters is one of the main highlights of this release.

OFED 1.2.5 Contents

The OFED Distribution package generates RPMs for installing the following components. Components that are not supported by Mellanox are marked as such.

The OFED package contains the following components:

- OpenFabrics core:
  - IB HCA drivers
    - mthca – for InfiniHost III based adapters
    - mlx4 – for ConnectX based adapters
    - ipath (not supported by Mellanox)
    - ehca (not supported by Mellanox)
    - iWARP RNIC driver (cxgb3) (not supported by Mellanox)
    - core
- OpenFabrics ULPs (Upper Layer Protocols):
  - IPoIB
  - SDP
  - SRP Initiator
  - iSER Host (not supported by Mellanox)
  - RDS
  - uDAPL (not supported by Mellanox)
  - VNIC (not supported by Mellanox)
- OpenFabrics utilities:
  - OpenSM (OSM): InfiniBand Subnet Manager
  - Diagnostic tools
  - Performance tests
- MPI:
  - OSU MPI stack supporting the InfiniBand and iWARP interface
  - Open MPI stack supporting the InfiniBand and iWARP interface
  - OSU MVAPICH2 stack supporting the InfiniBand and iWARP interface
• MPI benchmark tests (OSU benchmarks, Intel MPI benchmarks, Presta)
• Other packages:
  o open-iscsi: open-iscsi initiator with iSER support
  o ib-bonding: Bonding driver for IPoIB interface
• Sources of all software modules (under conditions mentioned in the modules' LICENSE files)
• Documentation

Third Party Packages

The following third party packages have been tested with OFED 1.2.5:
1. Intel MPI, Version 3.0 - Package ID: l_mpi_p_3.0.043
2. HP MPI, Version 2.2.5

Main Changes from OFED 1.2

Changes in components: The following components are different between OFED 1.2 and OFED 1.2.5:

User space:
  - libmlx4 (new)
  - mstflint (was enhanced to support ConnectX IB)
  - ofascripts
  - perfstest
  - MVAPICH
  - opensm

Kernel:
  - Code is based on kernel 2.6.22
  - mthca
  - mlx4_core (new)
  - mlx4_ib (new)
  - core ~ (the verbs providers)
  - cxgb3
  - RDS

See release notes for each package for the specific changes from OFED 1.2

Supported Platforms and Operating Systems

• CPU architectures:
  - x86_64
  - x86
  - ia64
  - ppc64

• Linux Operating Systems:
- RedHat EL4 up3: 2.6.9-34.ELsmp
- RedHat EL4 up4: 2.6.9-42.ELsmp
- RedHat EL4 up5: 2.6.9-55.ELsmp
- RedHat EL5: 2.6.18-8.el5
- SLES9 SP3: 2.6.5-7.244-smp
- SLES10: 2.6.16.21-0.8-smp
- SLES10 SP1: 2.6.16.46-0.12-smp (partially tested)
- kernel.org: 2.6.20.x and 2.6.22.x

HCAs Supported by Mellanox

- Mellanox Technologies HCAs (SDR and DDR modes are supported):
  - InfiniHost (fw-23108 Rev 3.5.000)
  - InfiniHost III Ex (MemFree: fw-25218 Rev 5.2.000 with memory: fw-25208 Rev 4.8.200)
  - InfiniHost III Lx (fw-25204 Rev 1.2.000)
  - ConnectX IB (fw-25408 Rev 2.2.000)

For official firmware versions please see:
http://www.mellanox.com/support/firmware_table.php

InfiniBand Switches and Gateways Supported

This release was tested with switches and gateways provided by the following companies:
- Cisco
- Voltaire
- Qlogic
- Flextronics