



Mellanox NATIVE ESX Driver for VMware vSphere 6.0 Release Notes

Rev 3.15.11.6

NOTE:

THIS HARDWARE, SOFTWARE OR TEST SUITE PRODUCT ("PRODUCT(S)") AND ITS RELATED DOCUMENTATION ARE PROVIDED BY MELLANOX TECHNOLOGIES "ASIS" WITH ALL FAULTS OF ANY KIND AND SOLELY FOR THE PURPOSE OF AIDING THE CUSTOMER IN TESTING APPLICATIONS THAT USE THE PRODUCTS IN DESIGNATED SOLUTIONS. THE CUSTOMER'S MANUFACTURING TEST ENVIRONMENT HAS NOT MET THE STANDARDS SET BY MELLANOX TECHNOLOGIES TO FULLY QUALIFY THE PRODUCT(S) AND/OR THE SYSTEM USING IT. THEREFORE, MELLANOX TECHNOLOGIES CANNOT AND DOES NOT GUARANTEE OR WARRANT THAT THE PRODUCTS WILL OPERATE WITH THE HIGHEST QUALITY. ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT ARE DISCLAIMED. IN NO EVENT SHALL MELLANOX BE LIABLE TO CUSTOMER OR ANY THIRD PARTIES FOR ANY DIRECT, INDIRECT, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES OF ANY KIND (INCLUDING, BUT NOT LIMITED TO, PAYMENT FOR PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY FROM THE USE OF THE PRODUCT(S) AND RELATED DOCUMENTATION EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.



Mellanox Technologies
350 Oakmead Parkway Suite 100
Sunnyvale, CA 94085
U.S.A.
www.mellanox.com
Tel: (408) 970-3400
Fax: (408) 970-3403

© Copyright 2017. Mellanox Technologies Ltd. All Rights Reserved.

Mellanox®, Mellanox logo, Accelio®, BridgeX®, CloudX logo, CompustorX®, Connect-IB®, ConnectX®, CoolBox®, CORE-Direct®, EZchip®, EZchip logo, EZappliance®, EZdesign®, EZdriver®, EZsystem®, GPUDirect®, InfiniHost®, InfiniBridge®, InfiniScale®, Kotura®, Kotura logo, Mellanox CloudRack®, Mellanox CloudXMellanox®, Mellanox Federal Systems®, Mellanox HostDirect®, Mellanox Multi-Host®, Mellanox Open Ethernet®, Mellanox OpenCloud®, Mellanox OpenCloud Logo®, Mellanox PeerDirect®, Mellanox ScalableHPC®, Mellanox StorageX®, Mellanox TuneX®, Mellanox Connect Accelerate Outperform logo, Mellanox Virtual Modular Switch®, MetroDX®, MetroX®, MLNX-OS®, NP-1c®, NP-2®, NP-3®, NPS®, Open Ethernet logo, PhyX®, PlatformX®, PSIPHY®, SiPhy®, StoreX®, SwitchX®, Tiler®, Tiler logo, TestX®, TuneX®, The Generation of Open Ethernet logo, UFM®, Unbreakable Link®, Virtual Protocol Interconnect®, Voltaire® and Voltaire logo are registered trademarks of Mellanox Technologies, Ltd.

All other trademarks are property of their respective owners.

For the most updated list of Mellanox trademarks, visit <http://www.mellanox.com/page/trademarks>

Table of Contents

Table of Contents	3
List Of Tables	4
Release Update History	5
Chapter 1 Overview	6
1.1 Content of MLNX-NATIVE-ESX Package	6
1.2 Supported HCAs Firmware Versions	6
Chapter 2 Changes and New Features in Rev 3.15.11.6	7
Chapter 3 Known Issues	8
Chapter 4 Bug Fixes History	9
Chapter 5 Change Log History	10

List Of Tables

Table 1:	Release Update History	5
Table 2:	Supported HCAs Firmware Versions	6
Table 3:	Changes and New Features in Rev 3.15.11.6	7
Table 4:	Known Issues	8
Table 5:	Fixed Bugs List	9
Table 6:	Change Log History	10

Release Update History

Table 1 - Release Update History

Release	Date	Description
Rev 3.15.11.6	November 30, 2017	Initial release of this MLNX-NATIVE-ESX version

1 Overview

These are the release notes of "Mellanox Native Driver for VMware® vSphere 2015". This document provides instructions on drivers for Mellanox Technologies ConnectX® based adapter cards with VMware ESXi Server environment.

1.1 Content of MLNX-NATIVE-ESX Package

The MLNX-NATIVE-ESX driver package is distributed as an offline bundle (.zip file) and contains:

- MLNX-NATIVE-ESX-ConnectX-3-3.15.11.6-10EM-600.0.0.2768847.zip - Hypervisor bundle for ESXi 2015 bundle contains the following kernel modules:
 - nmlx4_core (ConnectX family low-level PCI driver)
 - nmlx4_en (Mellanox Technologies Ethernet driver)
 - nmlx4_rdma (Mellanox Technologies RDMA driver)
- nmlx_en_mgmtInterface.tar.gz - management interface tarball

1.2 Supported HCAs Firmware Versions

MLNX-NATIVE-ESX Rev 3.15.11.6 supports the following Mellanox Ethernet HCA:

Table 2 - Supported HCAs Firmware Versions

HCAs	Recommended Firmware Rev.
ConnectX-3 Pro	2.42.5000
ConnectX-3	2.42.5000

Please note that older firmware versions were not tested with this release.

For the latest firmware versions, visit:

- http://www.mellanox.com/page/vmware_matrix
- or
- <http://www.mellanox.com/supportdownloader/>

2 Changes and New Features in Rev 3.15.11.6

Table 3 - Changes and New Features in Rev 3.15.11.6

Category	Description
Bug Fixes	See Section 4, “Bug Fixes History” , on page 9

3 Known Issues

The following is a list of general limitations and known issues of the various components of this MLNX-NATIVE-ESX release.

Table 4 - Known Issues

Description	Workaround
1118388	<p>Description: PFC related priority counters are always set to 0, even if the PFC mode is enabled.</p> <p>Workaround: N/A</p> <p>Keywords: PFC, counters</p> <p>Discovered in Version: 4.15.11.6</p>
781277	<p>Description: The "esxcli network sriovnic vf stats" command is not supported. When running this command on a vmknic, a failure message is displayed.</p> <p>Workaround: N/A</p> <p>Keywords: esxcli SR-IOV</p> <p>Discovered in Version: 4.15.11.6</p>
1117422	<p>Description: ConnectX-3 Pro 10G adapter cards wrongly report support for 40G speed when running the "esxcli network nic get" command.</p> <p>Workaround: N/A</p> <p>Keywords: Link speed</p> <p>Discovered in Version: 3.15.5.5</p>
-	<p>Description: When the port is DOWN, the management interface <code>port type</code> field indicates one of the port types supported by the device, in the following order: TP, FIBER, DA, NONE. If the port supports several cable types, the first type in the list mentioned above will be printed.</p> <p>Workaround: N/A</p> <p>Keywords: Port Type</p> <p>Discovered in Version: 3.2.0.15</p>
-	<p>Description: Management interface <code>port type</code> field reports SFP-to-RJ45 cable as FIBER.</p> <p>Workaround: N/A</p> <p>Keywords: Port Type</p> <p>Discovered in Version: 3.2.0.15</p>
-	<p>Description: Management interface <code>auto negotiation</code> field is equivalent to "esxcli network nic get -n vmnicX" field "Pause Autonegotiate".</p> <p>Workaround: N/A</p> <p>Keywords: Port Type</p> <p>Discovered in Version: 3.2.0.15</p>

4 Bug Fixes History

Table 5 lists the bugs fixed in this release.

Table 5 - Fixed Bugs List

Internal Ref.	Description
1026811	<p>Description: Fixed an internal multicast loopback issue that broke LACP bonding protocol.</p> <p>Keywords: multicast loopback, LACP Bonding</p> <p>Discovered in Release: 1.9.9.7</p> <p>Fixed in Release: 3.15.11.5</p>
-	<p>Description: Fixed an issue which prevented VLAN tag Priority Code Point (PCP) in RX and TX from working properly.</p> <p>Keywords: Ethernet</p> <p>Discovered in Release: 3.2.0</p> <p>Fixed in Release: 3.15.2.0</p>
-	<p>Description: Fixed a PSOD case during installation when the RDMA module was not removed.</p> <p>Keywords: Installation</p> <p>Discovered in Release: 3.2.0</p> <p>Fixed in Release: 3.15.2.0</p>
-	<p>Description: Management interface port type field (nmlx_en_MgmtIFPortType) reported incorrect value.</p> <p>Keywords: Management interface</p> <p>Discovered in Release: 3.2.0</p> <p>Fixed in Release: 3.2.0</p>

5 Change Log History

Table 6 - Change Log History

Category/Feature	Description
Rev. 3.15.5.5	
Management Interface	Updated Management Interface APIs
Rev. 3.15.2.0	
Bug fixes	See Section 4, “Bug Fixes History” , on page 9
Rev. 3.2.0	
VXLAN	Added support for VXLAN hardware offload. VXLAN hardware offload enables the traditional offloads to be performed on the encapsulated traffic. With ConnectX®-3 Pro, data center operators can decouple the overlay network layer from the physical NIC performance, thus achieving native performance in the new network architecture.
Rev. 3.1.0	
Management interface	Added Management Interface support
Rev. 3.0.0	
Hardware Performance	<ul style="list-style-type: none"> • 1G • 10G • 40G
Hardware Offload	<ul style="list-style-type: none"> • Large Send Offload (TCP Segmentation Offload) • WoL (only on supported hardware) • RSS Queues
Hardware Capabilities	<ul style="list-style-type: none"> • Multiple Tx/Rx rings • NetQueue support • Fixed Pass-Through • Single/Dual port • MSI-X