



Mellanox NATIVE ESX Driver for VMware vSphere 6.5 Release Notes

Rev 3.16.11.6

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Release Update History

Table 1 - Release Update History

Release	Date	Description
Rev 3.16.11.6	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 2016". 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_3.16.11.6-10EM-650.0.0.4598673.zip - Hypervisor bundle for ESXi 2016 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 3.16.11.6 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 3.16.11.6

Table 3 - Changes and New Features in Rev 3.16.11.6

Category	Description
Packet Capture Utility	<p>Packet Capture utility duplicates all traffic, including RDMA, in its raw Ethernet form (before stripping) to a dedicated "sniffing" QP, and then passes it to an ESX drop capture point.</p> <p>It allows gathering of Ethernet and RoCE bidirectional traffic via pkt-cap-uw and viewing it using regular Ethernet tools, e.g. Wireshark</p> <p>To enable/disable packet capture, download the Packet Capture Management Tool from the Mellanox site (see the Management Tools Download Tab)</p> <p>For further information, refer to the User Manual section Packet Capture Utility.</p>
Management Interface	Updated Management Interface APIs
VXLAN	<p>Added support for VXLAN hardware offload.</p> <p>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.</p>
Management interface	Added Management Interface support
Hardware Performance	<ul style="list-style-type: none"> • 1G • 10G • 40G • 56G
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

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

Internal Ref.	Issue
1117422	Description: ConnectX-3 Pro 10G adapter cards may wrongly report support for 40G speed when running the "esxcli network nic get -n <vmnic_name>" command.
	Workaround: N/A
	Keywords: Port link
	Discovered in Version: 3.16.11.6
-	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.
	Workaround: N/A
	Keywords: Port, Cables
	Discovered in Version: 3.16.11.6
-	Description: Management interface <code>port type</code> field reports SFP-to-RJ45 cable as FIBER.
	Workaround: N/A
	Keywords: Management interface, cables
	Discovered in Version: 3.16.11.6
-	Description: Management interface <code>auto negotiation</code> field is equivalent to "esxcli network nic get -n vmnicX" field "Pause Autonegotiate"
	Workaround: N/A
	Keywords: Port link
	Discovered in Version: 3.16.11.6