



# Mellanox NATIVE ESX Driver for VMware vSphere 6.5 Release Notes

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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](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 <a href="#">Mellanox site</a> (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"> <li>• 1G</li> <li>• 10G</li> <li>• 40G</li> <li>• 56G</li> </ul>
Hardware Offload	<ul style="list-style-type: none"> <li>• Large Send Offload (TCP Segmentation Offload)</li> <li>• WoL (only on supported hardware)</li> <li>• RSS Queues</li> </ul>
Hardware Capabilities	<ul style="list-style-type: none"> <li>• Multiple Tx/Rx rings</li> <li>• NetQueue support</li> <li>• Fixed Pass-Through</li> <li>• Single/Dual port</li> <li>• MSI-X</li> </ul>

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