# Mellanox NATIVE ESX Driver for VMware vSphere 6.0 Release Notes

Rev 3.15.11.6

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

# 4    Bug Fixes History

Table 5 lists the bugs fixed in this release.

*Table 5 - Fixed Bugs List*

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

# 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.<br>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** | • 1G<br>• 10G<br>• 40G |
| **Hardware Offload** | • Large Send Offload (TCP Segmentation Offload)<br>• WoL (only on supported hardware)<br>• RSS Queues |
| **Hardware Capabilities** | • Multiple Tx/Rx rings<br>• NetQueue support<br>• Fixed Pass-Through<br>• Single/Dual port<br>• MSI-X |