



Red Hat Enterprise Linux (RHEL) 6.10 Driver Release Notes

RHEL 6.10

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Mellanox Technologies
350 Oakmead Parkway Suite 100
Sunnyvale, CA 94085
U.S.A.
www.mellanox.com
Tel: (408) 9703400
Fax: (408) 9703403

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1 Overview

These are the release notes of Red Hat Enterprise Linux (RHEL) 6.10 Driver. This document provides instructions on drivers for Mellanox Technologies ConnectX® based adapter cards with Red Hat Enterprise Linux (RHEL) 6.10 Driver environment.

This version supports the following uplinks to servers:

Table 1 - Supported Uplinks to Servers

| Uplink/HCAs | Uplink Speed | Supported Driver |
|---------------------------------|---|---|
| ConnectX®-4 | <ul style="list-style-type: none"> InfiniBand: SDR, QDR, FDR10, FDR, EDR Ethernet: 1GigE, 10GigE, 25GigE, 40GigE, 50GigE, 56GigE^a, and 100GigE | mlx5_core (includes the ETH functionality as well), mlx5_ib |
| ConnectX®-4 Lx | <ul style="list-style-type: none"> Ethernet: 1GigE, 10GigE, 25GigE, 40GigE, and 50GigE | mlx5_core (includes the ETH functionality as well) |
| Connect-IB® | <ul style="list-style-type: none"> InfiniBand: SDR, QDR, FDR10, FDR | mlx5_core, mlx5_ib |
| ConnectX®-3/ ConnectX®-3 Pro | <ul style="list-style-type: none"> InfiniBand: SDR, QDR, FDR10, FDR Ethernet: 10GigE, 40GigE and 56GigE^a | mlx4_core, mlx4_en, mlx4_ib |
| ConnectX®-2 | <ul style="list-style-type: none"> InfiniBand: SDR, DDR Ethernet: 10GigE, 20GigE | mlx4_core, mlx4_en, mlx4_ib |

a. 56GbE is a Mellanox propriety link speed and can be achieved while connecting a Mellanox adapter cards to Mellanox SX10XX switch series or connecting a Mellanox adapter card to another Mellanox adapter card.

1.1 Supported HCAs Firmware Versions

Red Hat Enterprise Linux (RHEL) 6.10 Driver supports the following Mellanox network adapter cards firmware versions:

Table 2 - Supported HCAs Firmware Versions

| HCA | Recommended Firmware Rev. |
|-----------------|---------------------------|
| Connect-IB® | 10.16.1020 |
| ConnectX®-4 Lx | 14.22.1002 |
| ConnectX®-4 | 12.22.1002 |
| ConnectX®-3 Pro | 2.42.5000 |
| ConnectX®-3 | 2.42.5000 |
| ConnectX®-2 | 2.9.1000 |

1.2 SR-IOV Support

Table 3 - SR-IOV Support

| Driver | Support |
|---|--------------------------------|
| mlx4_core, mlx4_en, mlx4_ib | Technical Preview ^a |
| mlx5_core (includes ETH functionality), mlx5_ib | No |

a. Technical Preview is not fully supported production feature.

1.3 RoCE Support

Table 4 - RoCE Support

| Driver | Support |
|-------------------|---------|
| mlx4 - RoCE v1 | Yes |
| mlx4 - RoCE v2 | No |
| mlx5 - RoCE v1/v2 | No |

1.4 VXLAN Support

Table 5 - VXLAN Support

| Driver | Support |
|----------------------|---------|
| mlx4 - VXLAN offload | Yes |
| mlx5 - VXLAN offload | No |

2 Changes and New Features

Table 6 - Changes and New Features

| Feature/Change | Description |
|----------------|--|
| General | This is a general bug fixes release. It does not include any Mellanox drivers' specific fixes. |

3 Known Issues

The following table describes known issues in this release and possible workarounds..

Table 7 - Known Issues (Sheet 1 of 2)

| Internal Ref. | Description |
|---------------|---|
| 765695 | Description: mlx4_en network interfaces could be created as a renameX on RHEL6.8 SR-IOV guest. |
| | Workaround: N/A |
| | Keywords: mlx4_en network interfaces |
| 754436 | Description: Kdump/kexec is not supported on the mlx5 driver. |
| | Workaround: N/A |
| | Keywords: Kdump/kexec |
| 753564 | Description: Lower than expected TCP throughput over the ConnectX-4 IPoIB interface. |
| | Workaround: N/A |
| | Keywords: TCP throughput |
| 978511 | Description: Lower than expected TCP throughput over ConnectX-4 100Gb Ethernet. |
| | Workaround: N/A |
| | Keywords: TCP throughput, ConnectX-4 100Gb Ethernet |
| 751780 | Description: The error message "mlx4_en 0000:05:00.0: Failed assigning an EQ to p6p1-16, falling back to legacy EQ's" will appear in the log messages after changing the mlx4_en interface number of channels. |
| | Workaround: N/A |
| | Keywords: mlx4_en network interfaces |
| 961977 | Description: Kdump/kexec is not supported in Infiniband devices. |
| | Workaround: N/A |
| | Keywords: Kdump/kexec |
| 944778 | Description: Dynamic MTU value must be higher than the static MTU in ConnectX-4 when NC-SI is enabled. |
| | Workaround: Disable NC-SI in the firmware INI and burn it. |
| | Keywords: Firmware, NC-SI, MTU |
| 887217 | Description: macvtap over mlx4_en cannot receive IPv6 ns packet. |
| | Workaround: N/A |
| | Keywords: macvtap, IPv6 |
| 880822 | Description: rdma_cm UD does not function while SR-IOV is enabled. |
| | Workaround: Disable SR-IOV in grub and via module parameter. |
| | Keywords: SR-IOV, UD, rdma_cm |

Table 7 - Known Issues (Sheet 2 of 2)

| Internal Ref. | Description |
|---------------|---|
| 1001977 | Description: <code>ib_pma_portcounters_cong</code> counters freeze at 32b int max. |
| | Workaround: N/A. |
| | Keywords: InfiniBand, counters |
| 962813 | Description: Running Virtual ETH (VETH) over OVS may cause <code>ovsbr0: hw csum</code> failure messages in log. |
| | Workaround: N/A. |
| | Keywords: VETH, OVS |