



Red Hat Enterprise Linux (RHEL) 6.9 Driver Release Notes

RHEL 6.9

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1 Overview

These are the release notes of Red Hat Enterprise Linux (RHEL) 6.9 Driver. This document provides instructions on drivers for Mellanox Technologies ConnectX® based adapter cards with Red Hat Enterprise Linux (RHEL) 6.9 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"> 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) 6.9 Driver supports the following Mellanox network adapter cards firmware versions:

Table 2 - Supported HCAs Firmware Versions

HCA	Recommended Firmware Rev.	Additional Firmware Rev. Supported
Connect-IB®	10.16.1020	N/A
ConnectX®-4 Lx	14.18.2000	N/A
ConnectX®-4	12.18.2000	N/A
ConnectX®-3 Pro	2.40.5030	N/A
ConnectX®-3	2.40.5030	N/A
ConnectX®-2	2.9.1000	N/A

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 version does not include new features. It only includes bug fixes from RHEL 6.8.

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