



SUSE Linux Enterprise Server (SLES) 12 SP2 Driver

SLES 12 SP2

Release Notes

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1 Overview

These are the release notes of SUSE Linux Enterprise Server (SLES) 12 SP2 Driver. This document provides instructions on drivers for Mellanox Technologies ConnectX® based adapter cards with SUSE Linux Enterprise Server (SLES) 12 SP2 Driver Inbox Driver environment.

This version supports the following uplinks to servers:

Table 1 - Supported Uplinks to Servers

HCA	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

SUSE Linux Enterprise Server (SLES) 12 SP2 Driver Driver SLES 12 SP2 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®	10.14.2036	N/A
ConnectX®-4 Lx	14.14.2036	N/A
ConnectX®-4	12.14.2036	N/A
ConnectX®-3 Pro	2.36.5000	N/A
ConnectX®-3	2.36.5000	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	Technical Preview ^a

a. Technical Preview is not fully supported production feature.

1.3 RoCE Support

Table 4 - RoCE Support

Driver	Support
mlx4 - RoCE v1/v2	Yes
mlx5 - RoCE v1/v2	Yes

1.4 VXLAN Support

Table 5 - VXLAN Support

Driver	Support
mlx4 - VXLAN offload	Yes
mlx5 - VXLAN offload	Yes (without RSS)

2 Changes and New Features

Table 6 - Changes and New Features

Feature/Change	Description
mlx5	<ul style="list-style-type: none"> • RoCE v1/v2 • Ethernet SR-IOV • QoS DCBNL IEE ETS/PFC/ETS rate limit • QoS TC/UP mapping support • WoL support via ethtool • VXLAN support without RSS • Checksum complete • TC offloads (Flower support) • Flow steering • Raw QP • IPoIB offloads with ConnectX-4 • memory windows allocation • Re-registration of MRs • Arbitrary sg list support • Do not trap rule • Offload arithmetic hardware capabilities • RoCE SR-IOV
mlx4	<ul style="list-style-type: none"> • Do not trap rule

3 Known Issues

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

Table 7 - Known Issues

Internal Ref.	Description
835911	Description: mlx4_en network interfaces could be created as a renameX on SLES12 SP2 SRI-OV guest.
	WA: N/A
	Keywords: mlx4_en network interface
817931	Description: VPD (Vital Product Data) information cannot be presented when using the "lspci".
	WA: N/A
	Keywords: VPD
592895	Description: connectx_port_config script writes "/etc/infiniband/connectx.conf: No such file or directory" remark upon usage.
	WA: N/A
	Keywords: connectx_port_config script
597421	Description: InfiniBand interface might be down after driver restart on ConnectX-4.
	WA: Manually bringing up using "ifconfig up"
	Keywords: InfiniBand interface
594212	Description: ib_ipoib module is down after PXE installation.
	WA: Reboot the machine after PXE installation.
	Keywords: PXE
593533	Description: 100G does not appear as the supported link mode in ConnectX-4 and 25G in ConnectX-4 Lx.
	WA: N/A
	Keywords: Link Speed
825177	Description: "BAR 6: failed to assign [mem size 0x00100000 pref]" messages may appear after a reboot on ConnectX-3 or ConnectX-4
	WA: N/A
	Keywords: Driver reboot, ConnectX-3, ConnectX-4