



# SUSE Linux Enterprise Server (SLES) 15 SP2 Inbox Driver Release Notes

SLES 15 SP2

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# 1 Overview

These are the release notes of SUSE Linux Enterprise Server (SLES) 15 SP2 Inbox Driver. This document provides instructions on drivers for Mellanox Technologies ConnectX® based adapter cards with SUSE Linux Enterprise Server (SLES) 15 SP2 Inbox Driver environment.

This version supports the following uplinks to servers:

**Table 1: Supported Uplinks to Servers**

HCA's	Uplink Speed	Supported Driver
ConnectX®-6 DX	<ul style="list-style-type: none"> <li>Ethernet: 1GigE, 10GigE, 25GigE, 40GigE, 50GigE, 100GigE, 200 GigE</li> </ul>	mlx5_core (includes the ETH functionality as well), mlx5_ib
ConnectX®-6	<ul style="list-style-type: none"> <li>InfiniBand: SDR, DDR, QDR, FDR, EDR, HDR100, HDR.</li> <li>Ethernet: 1GigE, 10GigE, 25GigE, 40GigE, 50GigE, 100GigE, 200 GigE</li> </ul>	mlx5_core (includes the ETH functionality as well), mlx5_ib
ConnectX®-5	<ul style="list-style-type: none"> <li>InfiniBand: SDR, QDR, FDR, FDR10, EDR</li> <li>Ethernet: 1GigE, 10GigE, 25GigE, 40GigE, 50GigE, 56GigE<sup>a</sup>, and 100GigE</li> </ul>	mlx5_core (includes the ETH functionality as well), mlx5_ib
ConnectX®-4	<ul style="list-style-type: none"> <li>InfiniBand: SDR, QDR, FDR, FDR10, EDR</li> <li>Ethernet: 1GigE, 10GigE, 25GigE, 40GigE, 50GigE, 56GigE<sup>a</sup>, and 100GigE</li> </ul>	mlx5_core (includes the ETH functionality as well), mlx5_ib
ConnectX®-4 Lx	<ul style="list-style-type: none"> <li>Ethernet: 1GigE, 10GigE, 25GigE, 40GigE, and 50GigE</li> </ul>	mlx5_core (includes the ETH functionality as well)
Innova™ IPsec EN	<ul style="list-style-type: none"> <li>Ethernet: 10GigE, 40GigE</li> </ul>	mlx5_core (includes the ETH functionality as well)
Connect-IB®	<ul style="list-style-type: none"> <li>InfiniBand: SDR, QDR, FDR10, FDR</li> </ul>	mlx5_core, mlx5_ib
ConnectX®-3/ ConnectX®-3 Pro	<ul style="list-style-type: none"> <li>InfiniBand: SDR, QDR, FDR10, FDR</li> <li>Ethernet: 10GigE, 40GigE and 56GigEa</li> </ul>	mlx4_core, mlx4_en, mlx4_ib
BlueField	<ul style="list-style-type: none"> <li>Ethernet: 1GigE, 10GigE, 25GigE, 40GigE, 50GigE, 56GigE, and 100GigE</li> </ul>	mlx5_core (includes the ETH functionality as well), mlx5_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.

# Supported HCAs Firmware Versions

SUSE Linux Enterprise Server (SLES) 15 SP2 Inbox Driver supports the following Mellanox network adapter cards firmware versions.

**Table 2: Supported HCAs Firmware Versions**

HCA	Recommended Firmware Rev.
ConnectX®-6 Dx	22.28.2006
ConnectX®-6	20.28.2006
Connect-IB®	10.16.1200
BlueField®	18.28.2006
BlueField®-2	24.28.2006
ConnectX®-5	16.28.2006
Innova™ IPsec EN	14.22.1002
ConnectX®-4 Lx	14.28.2006
ConnectX®-4	12.28.2006
ConnectX®-3 Pro	2.42.5000
ConnectX®-3	2.42.5000

# SR-IOV Support

**Table 3: SR-IOV Support**

Driver	Support
mlx4_core, mlx4_en, mlx4_ib	Eth InfiniBand: Technical Preview <sup>a</sup>
mlx5_core (includes ETH functionality), mlx5_ib	Eth InfiniBand: Technical Preview <sup>a</sup>

**a. Technical Preview is not a fully supported production feature.**

## RoCE Support

Table 4: RoCE Support

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

## VXLAN Support

Table 5: VXLAN Support

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

## DPDK Support

Table 6: DPDK Support

Driver	Support
mlx4	Yes
mlx5	Yes

## Open vSwitch Hardware Offloads Support

Table 7: Open vSwitch Hardware Offloads Support

Driver	Support
mlx4	No
mlx5	Yes

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## 2 Changes and New Features

**Table 8: Changes and New Features**

Feature/Change	Component	Description
RDMA user-space	rdma-core	Updated the RDMA package to version 27.1-1.12
mstflint user-space	mstflint	Updated mstflint package to version 4.13.3-1.43
General update	mlx5	Aligned the mlx5 driver to the Linux upstream kernel driver version 5.3
General update	mlx4	Aligned the mlx4 driver to the Linux upstream kernel driver version 5.3

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## 3 Known Inbox-Related Issues

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

Internal Ref.	Description
1284059	<p><b>Description:</b> BW degradations due to Page Table Isolation (PTI) Intel's CPU security fix.</p> <p><b>Workaround:</b> Disable the PTI at run time by:</p> <ul style="list-style-type: none"><li>• writing 0 to <code>/sys/kernel/debug/x86/pti_enabled</code>.</li></ul> <p>or</p> <ul style="list-style-type: none"><li>• adding "nopti" or "pti=off" to <code>grub.conf</code></li></ul> <p><b>Keywords:</b> Performance</p>



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