



## **General Support**

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## Embedded DOCA Firmware Components

Component	Version	Description
BlueField-3 NIC firmware	32.43.2402	Firmware is used to run user programs on the BlueField-3 which allow hardware to run
BlueField-2 NIC firmware	24.43.2402	Firmware is used to run user programs on the BlueField-2 which allow hardware to run
BMC firmware	<a href="#">24.10-17</a>	BlueField BMC firmware
BlueField-3 eROT (Glacier)	00.02.0195 .0000	BlueField-3 eROT firmware
BlueField-2 eROT (CEC)	04.0f	BlueField-2 eROT firmware

## Supported NIC Firmware Versions

### Note

DOCA 2.9.0 is the last DOCA release to support ConnectX-4. DOCA 2.9.0 will be an LTS version and will be supported for 3 years for bug fixes and CVE updates.

### Note

BlueField-2 and ConnectX-7 are the last generation of BlueField and ConnectX families, respectively, that are supported by MLNX\_OFED.

Adapter Card	Bundled Firmware Version
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BlueField-3	32.43.2026
BlueField-2	24.43.2026
ConnectX-7	28.43.2026
ConnectX-6 Lx	26.43.2026
ConnectX-6 Dx	22.43.2026
ConnectX-6	20.43.2026
ConnectX-5/ConnectX-5 Ex	16.35.4030
BlueField	18.33.1048
ConnectX-4 Lx	14.32.1900
ConnectX-4	12.28.2302

To obtain the official firmware versions, refer to the NVIDIA [Firmware Download](#) page.

## Embedded DOCA Drivers

Component	Version	Description	Licenses
clusterkit	1.14.462-1.2410068	Multifaceted node assessment tool for high-performance clusters	BSD
collectx-clxapi	1.19.1	CollectX API library which allows any 3 <sup>rd</sup> party to easily use CollectX functionality in their own programs	Proprietary
dpacc	1.9.0-6	High-level compiler for the DPA processor which compiles code targeted for the data-path accelerator (DPA) processor into a device executable and generates a DPA program	Proprietary
dpcp	1.1.50-1.2410068	Provides a unified flexible interface for programming IB devices using DevX	Proprietary
flexio	24.10.2454	SDK which exposes an API for managing the device and executing native code over the DPA processor	Proprietary
fwctl	24.10.OFED.24.10.1.1.4.1	Subsystem designed to standardize the secure firmware interface for userspace, focusing on debugging, configuration, and provisioning	GPLv2

Component	Version	Description	Licenses
hcoll	4.8.3230-1.2410068	Contains support for building runtime configurable hierarchical collectives	Proprietary
ibarr	0.1.3-1.2410068	ip2gid address resolution and gid2lid path record resolution	GPL-2.0 with Linux-syscall-note or BSD-2-Clause
ibdum p	6.0.0-1.2410068	Dump of InfiniBand traffic; diagnostic tool	BSD2+GPL2
ibsim	0.12-1.2410068	Open-source InfiniBand fabric simulator	GPLv2 or BSD
ibutils	2.1.1	ibdiagnet scans the fabric using directed route packets and extracts all the available information regarding its connectivity and devices.	Proprietary
ibutils 2	2.1.1-0.21902.MLN X20241029.g46cf6278.2410068	Utilities for InfiniBand	Proprietary
iser	24.10.OFED.24.10.1.1.4.1	Storage related drivers	GPLv2
isert	24.10.OFED.24.10.1.1.4.1	Storage related drivers	GPLv2
kernel-mft	4.30.0-139	Kernel part of MFT tools (for firmware burning, etc.)	Dual BSD/GPL
knem	1.1.4.90mlnx3 - OFED.23.10.0.2.1.1	Open-source kernel module that enables high-perf intra-node MPI communication	BSD and GPLv2
libvma	<a href="#">9.8.60-1</a>	Accelerates latency-sensitive and throughput-demanding TCP and UDP socket-based applications by offloading traffic from the user-space directly to the NIC or HCA	GPLv2 or BSD
libxlio	<a href="#">3.40.2-1</a>	Boosts the performance of TCP/IP applications based on NGINX (CDN, DoH, etc.) and storage solutions as part of the SPDK	GPLv2 or BSD

<b>Component</b>	<b>Version</b>	<b>Description</b>	<b>Licenses</b>
mft	<a href="#">4.30.1-8</a>	Set of firmware management and debug tools for NVIDIA devices	Proprietary
mlnx-dpdk	22.11.0-2410.1.0	Equivalent to DPDK upstream. The versioning of MLNX_DPDK indicates which upstream DPDK it is compatible with it (e.g., 22.11 is compatible with upstream DPDK 2022.11).	BSD, LGPLv2, and GPLv2
mlnx-en	24.10-0.6.8.0.g9b1cc6c	Kernel drivers part for Ethernet-only package	GPLv2
mlnx-ethtool	6.9-1.2410068	Ethtool with optional MLNX adaptation	GPL
mlnx-iproute2	6.10.0-1.2410114	IPRoute with optional MLNX adaptation	GPL
mlnx-libsnap	1.6.0-2	Library designed to assist common tasks for applications wishing to interact with emulated hardware over BlueField and take the most advantage from hardware capabilities	Proprietary
mlnx-nfsrdma	24.10.OFED.24.10.1.1.4.1	Storage related driver for NFS over RDMA	GPLv2
mlnx-nvme	24.10.OFED.24.10.1.1.4.1	Storage related driver for NVMe	GPLv2
mlnx-ofa_kernel	24.10-OFED.24.10.0.6.8.1	Kernel drivers for Ethernet InfiniBand together	GPLv2
mlnx-snap	3.8.0-7	BlueField SNAP for NVMe and virtio-blk enables hardware-accelerated virtualization of local storage	Proprietary
mlnx-tools	24.10-0.2410068	Tools for loading modules, configurations, scripts, etc.	GPLv2 or BSD
mlx-regex	1.2-ubuntu1	Library providing RegEx pattern matching to DOCA applications using the regular expression processor (RXP) or software-based engines when required	Proprietary

Component	Version	Description	Licenses
mlx-steering-dump	1.0.0-0.2410068	Hardware/software steering dump parsing tools	GPLv2
mpitest	3.2.24-2ffc2d6.2410068	Test suite for benchmarking the MPI	BSD
mstflint	4.29.0-1	User space part of our MFT tools	GPL/BSD
multi-perf	3.0-3.0.2410068	Linux tool for perf testing	BSD 3-Clause, GPLv2 or later
ofed-scripts	24.10.OFED.24.10.1.1.4	Scripts used to build OFED	GPL/BSD
openmpi	4.1.7rc1-1.2410068	MPI implementation (for RDMA/RoCE) with some improvements done by the HPC team	BSD
opensm	<a href="#">5.21.0.MLNX20241126.d9aa3dff-0.1.2410114</a>	InfiniBand Subnet Manager and Subnet Administrator based on OpenSM	GPLv2 or BSD
openvswitch	2.17.8-1.2410068	OVS (virtual switch), DPDK based	ASL 2.0, LGPLv2+, and SISSL
perftest	24.10.0-0.65.g9093bae.2410068	Test suite for performance	BSD 3-Clause, GPLv2, or later
rdma-core	2410mlnx54-1.2410068	Implementation of the RDMA verbs	GPLv2 or BSD
rivermax	1:1.60.6	Optimized networking SDK for media and data streaming applications	Proprietary
rshim	2.1.8	User-space driver to access the BlueField SoC via the RShim interface, providing ways to push boot stream, debug the target, or login via the virtual console or network interface	GPLv2

Component	Version	Description	Licenses
sharp	<a href="#">3.9.0.MLNX20241029.7a20b607-1.2410068</a>	Improves the performance of MPI and machine learning collective operation by offloading from CPUs and GPUs to the network and eliminating the need to send data multiple times between endpoints	Proprietary
sockperf	3.10-0.git5ebd327da983.2410068	Network benchmarking utility over socket API UDP/TCP designed for testing network performance (latency and throughput)	BSD
spdk	23.01.5-26	Provides a set of tools and libraries for writing high performance, scalable, user-mode storage applications	Proprietary
srp	24.10.OFED.24.10.1.1.4.1	Storage-related driver for SCSI RDMA Protocol initiator	GPLv2
ucx	1.18.0-1.2410068	High-level application-oriented API for high-performance communication over RDMA networks	BSD
virtio-net-controller	24.10.30	Systemd service running on BlueField with a user interface front-end to manage the emulated virtio-net devices	Proprietary
xpmem	2.7.4-1.2410068	Kernel module to enable inter-process mapping for memory copy in user space	GPLv2 and LGPLv2.1
xpmem-lib	2.7-0.2310055	High-performance inter-process memory sharing	LGPLv2.1

## DOCA Packages

Device	Component	Version	Description
Host	DOCA Devel	2.9.1	Software development kit package and tools for developing host software
	DOCA Runtime	2.9.1	Runtime libraries and tools required to run DOCA-based software applications on host



Device	Component	Version	Description
	DOCA Extra	2.9.1	Contains helper scripts (doca-info, doca-kernel-support)
	DOCA OFED	2.9.1	Software stack which operates across all NVIDIA network adapter solutions
Target BlueField DPU (Arm)	BlueField BSP	4.9.1	BlueField image and firmware
	DOCA SDK	2.9.1	Software development kit packages and tools for developing Arm software
	DOCA Runtime	2.9.1	Runtime libraries and tools required to run DOCA-based software applications on Arm

## Supported Host OS and Features per DOCA-Host Installation Profile

The default operating system included with the BlueField Bundle (for DPU and SuperNIC) is Ubuntu 22.04.

The supported operating systems on the host machine per DOCA-Host installation profile are the following:

### Note

Only the following generic kernel versions are supported for DOCA local repo package for host installation.

Operating System	Architecture	Default Kernel Version (Primary)/ Tested with Kernel	Supported DOCA Profile	OS Support Model	ASAP 2 OVS-Kernel SR-IOV	ASAP 2 OVS-DPD K SR-IOV	NFS - over - RD MA	NVMe	GPU Direct Storage (GDS)	UCX - CUDA Version

		Version (Community)											
			doc a- all	doc a- net work ing	do ca - of ed	do ca - ro ce							
Alinu x 3.2	x8 6	5.10.134- 13.a18.x86_64	✓	✓	✓	✗	Prim ary	✗	✗	✗	✗	✗	✗
Alma 8.5	x8 6	4.18.0- 348.12.2.EL8_ 5.X86_64	✗	✗	✓	✗	Com mun ity	✗	✗	✗	✗	✗	✗
Anoli s OS 8.4	aar ch 64	4.18.0- 348.2.1.AN8_ 4.aarch64	✗	✗	✓	✗	Com mun ity	✗	✗	✗	✗	✗	✗
	x8 6	4.18.0- 305.AN8.X86_ 64	✗	✗	✓	✗	Com mun ity	✗	✗	✗	✗	✗	✗
Anoli s OS 8.6	aar ch 64	5.10.134+	✗	✗	✓	✗	Prim ary	✗	✗	✗	✗	✗	✗
	x8 6	5.10.134+	✗	✗	✓	✗	Prim ary	✗	✗	✗	✗	✗	✗
Azur e Linu x 3.0	x8 6	6.6.35.1- 5.azl3	✓	✓	✓	✗	Prim ary	✗	✗	✗	✗	✗	✗

BCLinux 21.1 OSP 2	aarch64	4.19.90-2107.6.0.009 8.oe1.bclinux.aarch64	✗	✗	✓	✗	Primary	✗	✗	✗	✓	✗	✗
	x86_64	4.19.90-2107.6.0.010 0.oe1.bclinux.x86_64	✗	✗	✓	✗	Primary	✗	✗	✓	✓	✗	✗
BCLinux 22.1 0	aarch64	5.10.0-153.24.0.100. 6.oe2203sp2.bclinux.aarch64	✗	✗	✓	✗	Primary	✗	✗	✗	✓	✗	✗
	x86_64	5.10.0-153.24.0.100. 6.oe2203sp2.bclinux.x86_64	✗	✗	✓	✗	Primary	✗	✗	✓	✓	✗	✗
CentOS Stream 8	aarch64	4.18.0-552.EL8.AARCH64	✗	✗	✓	✗	Community	✗	✗	✗	✗	✗	✗
	x86_64	4.18.0-552.el8.x86_64	✗	✗	✓	✗	Community	✗	✗	✗	✗	✗	✗
CentOS Stream 9	aarch64	5.14.0-480.EL9.AARCH64	✗	✗	✓	✗	Community	✗	✗	✗	✗	✗	✗
	x86_64	5.14.0-480.el9.x86_64	✗	✗	✓	✗	Community	✗	✗	✗	✗	✗	✗
CTyu	aarch64	4.19.90-					Prim						

nOS 22.0 6	ch 64	2102.2.0.006 6.ct12.aarch64	✗	✗	✓	✗	ary	✗	✗	✗	✗	✗	✗
	x8 6	4.19.90- 2102.2.0.006 6.ct12.x86_64	✗	✗	✓	✗	Prim ary	✗	✗	✗	✗	✗	✗
CTyu nOS 23.0 1	aar ch 64	5.10.0- 136.12.0.86.ct 13.aarch64	✓	✓	✓	✗	Prim ary	✗	✗	✗	✗	✗	✗
	x8 6	5.10.0- 136.12.0.86.ct 13.x86_64	✓	✓	✓	✓	Prim ary	✗	✗	✗	✗	✗	✗
Debi an 10.8	aar ch 64	4.19.0-14- arm64	✗	✗	✓	✗	Prim ary	✗	✗	✗	✗	✗	✗
	x8 6	4.19.0-14- amd64	✓	✓	✓	✗	Prim ary	✗	✗	✗	✗	✗	✗
Debi an 10.9	x8 6	4.19.0-14- amd64	✗	✗	✓	✗	Prim ary	✗	✗	✗	✗	✗	✗
	x8 6	4.19.0-16- amd64	✗	✗	✓	✗	Prim ary	✓	✗	✗	✓	✗	✗
Debi an 10.1 3	aar ch 64	4.19.0-21- arm64	✗	✗	✓	✗	Prim ary	✗	✗	✗	✗	✗	✗
	x8 6	4.19.0-21- amd64	✓	✓	✓	✗	Prim ary	✗	✗	✗	✗	✗	✗
Debi	aar	5.10.0-13-					Prim						

an 11.3	ch 64	arm64					ary						
	x8 6	5.10.0-13- amd64					Prim ary						
Debi an 12.1	aar ch 64	6.1.0-10- arm64					Prim ary						
	x8 6	6.1.0-10- amd64					Prim ary						
Debi an 12.5	aar ch 64	6.1.0-18- arm64					Prim ary						
	x8 6	6.1.0-18- amd64					Prim ary						
Euler OS 2.0 SP9	aar ch 64	4.19.90- vhulk2006.2.0 .h171.euleros v2r9.aarch64					Com mun ity						
	x8 6	4.18.0- 147.5.1.0.h26 9.eulerosv2r9. x86_64					Com mun ity						
Euler OS 2.0 SP1 0	aar ch 64	4.19.90- vhulk2110.1.0 .h860.euleros v2r10.aarch6 4					Com mun ity						

	x86	4.18.0-147.5.2.4.h694.eulerosv2r10.x86_64	✗	✗	✓	✗	Community	✗	✗	✗	✗	✗	✗
Euler OS 2.0 SP1	arch64	5.10.0-60.18.0.50.h323.eulerosv2r11.arch64	✗	✗	✓	✗	Primary	✗	✗	✗	✗	✗	✗
	x86	5.10.0-60.18.0.50.h323.eulerosv2r11.x86_64	✗	✗	✓	✗	Primary	✗	✗	✗	✗	✗	✗
Euler OS 2.0 SP1	arch64	5.10.0-136.12.0.86.h1032.eulerosv2r12.arch64	✗	✗	✓	✗	Primary	✗	✗	✗	✗	✗	✗
	x86	5.10.0-136.12.0.86.h1032.eulerosv2r12.x86_64	✗	✗	✓	✗	Primary	✗	✗	✗	✗	✗	✗
Kylin 10 SP2	arch64	4.19.90-24.4.v2101.ky10.arch64	✗	✗	✓	✗	Primary	✗	✗	✗	✗	✗	✗
	x86	4.19.90-24.4.v2101.ky10.x86_64	✗	✗	✓	✗	Primary	✓	✗	✗	✗	✗	✗
Kylin 10 SP3	arch64	4.19.90-52.22.v2207.ky10.arch64	✗	✗	✓	✗	Primary	✓	✗	✗	✗	✗	✗
	x86	4.19.90-					Primary						

		52.22.v2207.ky10.x86_64	✗	✗	✓	✗		✓	✗	✗	✗	✗	✗
Linux Kernel 6.11	arch 64	6.11	✗	✗	✓	✗	Primary	✓	✗	✗	✓	✗	✗
	x86		✗	✗	✓	✗	Primary	✓	✗	✓	✓	✗	✗
Mariner 2.0	x86	5.15.148.2-2.cm2	✗	✗	✓	✗	Primary	✗	✗	✗	✗	✗	✗
Oracle Linux 7.9	x86	5.4.17-2011.6.2.el7uek.x86_64	✗	✗	✓	✗	Primary	✗	✗	✗	✗	✗	✗
Oracle Linux 8.4	x86	5.4.17-2102.201.3.el8uek.x86_64	✗	✗	✓	✗	Primary	✗	✗	✗	✗	✗	✗
Oracle Linux 8.6	x86	5.4.17-2136.307.3.1.el8uek.x86_64	✗	✗	✓	✗	Primary	✗	✗	✗	✗	✗	✗
Oracle Linux 8.7	x86	5.15.0-3.60.5.1.el8uek.x86_64	✓	✓	✓	✗	Primary	✗	✗	✗	✗	✗	✗
Oracle Linux 8.8	x86	5.15.0-101.103.2.1.el8uek.x86_64	✗	✗	✓	✗	Primary	✗	✗	✗	✗	✗	✗

Oracle Linux 9.1	x86_64	5.15.0-3.60.5.1.el9uek.x86_64	✗	✗	✓	✗	Primary	✗	✗	✗	✗	✗	✗
Oracle Linux 9.2	x86_64	5.15.0-101.103.2.1.el9uek.x86_64	✗	✗	✓	✗	Primary	✗	✗	✗	✗	✗	✗
OpenSUSE 15.3	arch64	-	✗	✗	✓	✗	Community	✗	✗	✗	✗	✗	✗
	x86_64	5.3.18-150300.59.43-DEFAULT	✗	✗	✓	✗	Community	✗	✗	✗	✗	✗	✗
openEuler 20.03 SP1	arch64	4.19.90-2012.4.0.0053.OE1.aarch64	✗	✗	✓	✗	Community	✗	✗	✗	✗	✗	✗
	x86_64	4.19.90-2110.8.0.0119.OE1.X86_64	✗	✗	✓	✗	Community	✗	✗	✗	✗	✗	✗
openEuler 20.03 SP3	arch64	4.19.90-2112.8.0.0131.oe1.aarch64	✗	✗	✓	✗	Primary	✗	✗	✗	✗	✗	✗
	x86_64	4.19.90-2112.8.0.0131.oe1.x86_64	✗	✗	✓	✗	Primary	✗	✗	✗	✗	✗	✗
openEuler 22.0	x86_64	5.10.0-136.12.0.86.oe2203sp1.x86_64	✓	✗	✓	✗	Primary	✗	✗	✗	✗	✗	✗



3 SP1														
open Euler 22.0 3 SP3	x8 6	5.10.0- 182.0.0.95.oe 2203sp3.x86_ 64	✓	✗	✓	✗	Prim ary	✗	✗	✗	✗	✗	✗	✗
Phot on OS 3.0	x8 6	4.19.225- 3.ph3	✗	✗	✓	✗	Com mun ity	✗	✗	✗	✗	✗	✗	✗
RHE L/Ce ntOS 8.0	aar ch 64	4.18.0- 80.el8.aarch6 4	✗	✗	✓	✗	Prim ary	✓	✓	✗	✗	✓		12.6
	x8 6	4.18.0- 80.el8.x86_64	✗	✗	✓	✗	Prim ary	✓	✓	✗	✗	✓		12.6
RHE L/Ce ntOS 8.1	aar ch 64	4.18.0- 147.el8.aarch 64	✗	✗	✓	✗	Prim ary	✓	✓	✗	✗	✓		12.6
	x8 6	4.18.0- 147.el8.x86_6 4	✗	✗	✓	✗	Prim ary	✓	✓	✗	✗	✓		12.6
RHE L/Ce ntOS 8.2	aar ch 64	4.18.0- 193.el8.aarch 64	✗	✗	✓	✗	Prim ary	✓	✓	✗	✓	✓		12.6
	x8 6	4.18.0- 193.el8.x86_6 4	✓	✓	✓	✗	Prim ary	✓	✓	✓	✓	✓		12.6
RHE L/Ce	aar	4.18.0-					Prim ary							12.6

ntOS 8.3	ch 64	240.el8.aarch 64											
	x8 6	4.18.0- 240.el8.x86_6 4					Prim ary						12.6
RHE L/Ce ntOS 8.4	aar ch 64	4.18.0- 305.el8.aarch 64					Prim ary						12.6
	x8 6	4.18.0- 305.el8.x86_6 4					Prim ary						12.6
RHE L/Ce ntOS 8.5	aar ch 64	4.18.0- 348.el8.aarch 64					Prim ary						12.6
	x8 6	4.18.0- 348.el8.x86_6 4					Prim ary						12.6
RHE L/Ro cky 8.6	aar ch 64	aarch64.18.0 - 372.41.1.el8_ 6.aarch64					Prim ary						12.6
	pp c6 4le	4.18.0- 372.41.1.el8_ 6.ppc64le					Prim ary						12.6
	x8 6	4.18.0- 372.41.1.el8_ 6.x86_64					Prim ary						12.6
RHE L/Ro cky 8.7	aar ch 64	4.18.0- 425.14.1.el8_ 7.aarch64					Prim ary						12.6

	x86	4.18.0-425.14.1.el8_7.x86_64					Primary						12.6
RHEL/Rocky 8.8	aarch64	4.18.0-477.10.1.el8_8.aarch64					Primary						12.6
	ppc64le	4.18.0-477.10.1.el8_8.ppc64le					Primary						12.6
	x86	4.18.0-477.10.1.el8_8.x86_64					Primary						12.6
	aarch64	4.18.0-513.5.1.el8_9.aarch64					Primary						12.6
RHEL/Rocky 8.9	ppc64le	4.18.0-513.5.1.el8_9.ppc64le					Primary						12.6
	x86	4.18.0-513.5.1.el8_9.x86_64					Primary						12.6
	aarch64	4.18.0-553.el8_10.aarch64					Primary						12.6
RHEL/Rocky 8.10	ppc64le	4.18.0-553.el8_10.ppc64le					Primary						12.6
	x86	4.18.0-					Primary						12.6

		553.el8_10.x86_64											
RHEL/Rocky 9.0	arch64	5.14.0-70.46.1.el9_0.aarch64	✗	✗	✓	✗	Primary	✓	✗	✗	✓	✓	12.6
	ppc64le	5.14.0-70.46.1.el9_0.ppc64le	✗	✗	✓	✗	Primary	✓	✗	✗	✓	✓	12.6
	x86_64	5.14.0-70.46.1.el9_0.x86_64	✗	✗	✓	✗	Primary	✓	✗	✓	✓	✓	12.6
RHEL/Rocky 9.1	arch64	5.14.0-162.19.1.el9_1.aarch64	✗	✗	✓	✗	Primary	✓	✗	✗	✓	✓	12.6
	x86_64	5.14.0-162.19.1.el9_1.x86_64	✓	✓	✓	✗	Primary	✓	✗	✓	✓	✓	12.6
RHEL/Rocky 9.2	arch64	5.14.0-284.11.1.el9_2.aarch64	✗	✗	✓	✗	Primary	✓	✗	✗	✓	✓	12.6
	ppc64le	5.14.0-284.11.1.el9_2.ppc64le	✗	✗	✓	✗	Primary	✓	✗	✗	✓	✓	12.6
	x86_64	5.14.0-284.11.1.el9_2.x86_64	✗	✗	✓	✓	Primary	✓	✗	✓	✓	✓	12.6
RHEL/Rocky 9.3	arch64	5.14.0-362.8.1.el9_3.aarch64	✗	✗	✓	✗	Primary	✓	✗	✓	✓	✓	12.6

	ppc64le	5.14.0-362.8.1.el9_3.ppc64le	✗	✗	✓	✗	Primary	✓	✗	✓	✓	✓	12.6
	x86_64	5.14.0-362.8.1.el9_3.x86_64	✗	✗	✓	✓	Primary	✓	✗	✓	✓	✓	12.6
RHEL/Rocky 9.4	aarch64	5.14.0-427.13.1.el9_4.aarch64	✓	✓	✓	✗	Primary	✓	✗	✓	✓	✓	12.6
	ppc64le	5.14.0-427.13.1.el9_4.ppc64le	✗	✗	✓	✗	Primary	✓	✗	✓	✓	✓	12.6
	x86_64	5.14.0-427.13.1.el9_4.x86_64	✓	✓	✓	✓	Primary	✓	✗	✓	✓	✓	12.6
RHEL/Rocky 9.5	aarch64	5.14.0-503.11.1.el9_5.aarch64	✗	✗	✓	✗	Primary	✓	✗	✓	✓	✓	12.6
	ppc64le	5.14.0-503.11.1.el9_5.ppc64le	✗	✗	✓	✗	Primary	✓	✗	✓	✓	✓	12.6
	x86_64	5.14.0-503.11.1.el9_5.x86_64	✗	✗	✓	✓	Primary	✓	✗	✓	✓	✓	12.6
SLES 15 SP2	aarch64	5.3.18-22-default	✗	✗	✓	✗	Primary	✓	✓	✗	✓	✗	✗
	ppc64le	5.3.18-22-default	✗	✗	✓	✗	Primary	✓	✓	✗	✓	✗	✗
	x86_64	5.3.18-22-					Prim						

	6	default					ary						
SLES 15 SP3	arch 64	5.3.18-57-default					Primary						
	ppc64le	5.3.18-57-default					Primary						
	x86_64	5.3.18-57-default					Primary						
SLES 15 SP4	arch 64	5.14.21-150400.22-default					Primary						
	ppc64le	5.14.21-150400.22-default					Primary						
	x86_64	5.14.21-150400.22-default					Primary						
SLES 15 SP5	arch 64	5.14.21-150500.53-default					Primary						
	ppc64le	5.14.21-150500.53-default					Primary						
	x86_64	5.14.21-150500.53-default					Primary						
SLES	arch	6.4.0-					Prim						

15 SP6	ch 64	150600.21- default					ary						
	pp c6 4le	6.4.0- 150600.21- default					Prim ary						
	x8 6	6.4.0- 150600.21- default					Prim ary						
Tenc entO S 3.3	aar ch 64	5.4.119- 19.0009.39					Prim ary						
	x8 6	5.4.119- 19.0009.39					Prim ary						
Ubu ntu 20.0 4	aar ch 64	5.4.0-26- generic					Prim ary						12.6
	pp c6 4le	5.4.0-26- generic					Prim ary						12.6
	x8 6	5.4.0-26- generic					Prim ary						12.6
Ubu ntu 22.0 4	aar ch 64	5.15.0-25- generic					Prim ary						12.6
	pp c6 4le	5.15.0-25- generic					Prim ary						12.6

	x86	5.15.0-25-generic	✓	✓	✓	✓	Primary	✓	✓	✓	✓	✓	12.6
Ubuntu 24.04	arch64	6.8.0-31-generic	✓	✓	✓	✗	Primary	✓	✓	✓	✓	✓	12.6
	ppc64le	6.8.0-31-generic	✗	✗	✓	✗	Primary	✓	✓	✓	✓	✓	12.6
	x86	6.8.0-31-generic	✓	✓	✓	✓	Primary	✓	✓	✓	✓	✓	12.6
Ubuntu24.10	x86	6.11.0-8-generic	✗	✗	✓	✗	Primary	✓	✓	✓	✓	✓	12.4
UOS 20.1060	arch64	5.10.0-46.uel20.aarch64	✗	✗	✓	✗	Primary	✗	✗	✗	✗	✗	✗
	x86	5.10.0-46.uel20.x86_64	✗	✗	✓	✗	Primary	✗	✗	✗	✗	✗	✗
UOS 20.1060a	arch64	5.10.0-46.uelc20.aarch64	✗	✗	✓	✗	Primary	✗	✗	✗	✗	✗	✗
	x86	5.10.0-46.uelc20.x86_64	✗	✗	✓	✗	Primary	✗	✗	✗	✗	✗	✗

## DOCA-OFED Version Interoperability



This section reflects which versions were tested and verified for multi-version environments (i.e., environments with more than one doca-oped version on host servers).

Target Version	Versions Verified for Interoperability
24.10 Oct 2024	24.07-0.6.1.0- DOCA-OFED Profile-2.8.0
	23.10-3.2.2.0 LTS-DOCA-OFED-2.5.2

## BF-Bundle (BFB) Version Upgrade/Downgrade

The following table provides a matrix for the supported upgrade/downgrade of BFBs across different versions.

Version	Upgrade to	Downgrade to
1.5.0	2.0.2; 2.2.0; 1.5.1; 1.5.2; 1.5.3	1.4.0; 1.3.0
1.5.1	1.5.2	1.5.0
1.5.2	1.5.3	1.5.1; 1.5.0
1.5.3	N/A	1.5.2; 1.5.0
2.0.2	2.2.0; 2.5.0	1.5.0; 1.4.0
2.2.0	2.5.0; 2.6.0	N/A
2.2.1	2.5.0; 2.6.0	N/A
2.5.0	2.5.1; 2.6.0	2.2.1 for BlueField-3; 2.2.0 for BlueField-2
2.5.1	2.5.2	2.5.0
2.5.2	2.6.0; 2.7.0; 2.8.0; 2.9.0	2.5.1; 2.5.0
2.6.0	2.7.0; 2.8.0	2.5.0; 2.2.1 for BlueField-3; 2.2.0 for BlueField-2
2.7.0	2.8.0; 2.9.0	2.6.0; 2.5.0; 2.2.1 for BlueField-3; 2.2.0 for BlueField-2
2.8.0	2.9.0	2.7.0; 2.6.0; 2.5.0
2.9.0	2.9.1	2.8.0; 2.7.0
2.9.1	N/A	2.9.0; 2.8.0; 2.7.0

# Supported DOCA Version Upgrade Using Standard Linux Tools on BlueField

Version	Upgrade to
2.5.0	2.5.1; 2.6.0; 2.7.0; 2.8.0
2.5.1	2.5.2
2.5.2	N/A
2.6.0	2.7.0; 2.8.0
2.7.0	2.8.0; 2.9.0
2.8.0	2.9.0
2.9.0	2.9.1
2.9.1	N/A

## API Changes

N/A

## Device Definition

The supported adapter cards are specified as follows:

Supported Cards	Description
All HCAs	Supported in the following adapter cards unless specifically stated otherwise: ConnectX-4/ConnectX-4 Lx/ConnectX-5/ConnectX-6/ConnectX-6 Dx/ConnectX-6 Lx/ConnectX-7/BlueField-2/BlueField-3
ConnectX-6 Dx and above	Supported in the following adapter cards unless specifically stated otherwise: ConnectX-6 Dx/ConnectX-6 Lx/ConnectX-7/BlueField-2/BlueField-3
ConnectX-6 and above	Supported in the following adapter cards unless specifically stated otherwise: ConnectX-6/ConnectX-6 Dx/ConnectX-6 Lx/ConnectX-7/BlueField-2/BlueField-3

Supported Cards	Description
ConnectX-5 and above	Supported in the following adapter cards unless specifically stated otherwise: ConnectX-5/ConnectX-6/ConnectX-6 Dx/ConnectX-6 Lx/ConnectX-7/BlueField-2/BlueField-3
ConnectX-4 and above	Supported in the following adapter cards unless specifically stated otherwise: ConnectX-4/ConnectX-4 Lx/ConnectX-5/ConnectX-6/ConnectX-6 Dx/ConnectX-6 Lx/ConnectX-7/BlueField-2/BlueField-3

## Unsupported Functionalities/Features/NICs

The following are the unsupported functionalities/features/NICs in the current version:

- RDMA experimental verbs library (mlnx\_lib)
- Common internet file system (CIFS) module installation
- Relational database service (RDS)
- mthca InfiniBand driver
- Ethernet IPoIB (eIPoIB)
- InfiniBand-connected transport service
- IPSec over bond for crypto offload

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