



## **Installation Notes**

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## Supported Devices

### Supported NVIDIA Externally Managed Switches

Type	Model	Latest Tested Firmware Version
NDR switches	<ul style="list-style-type: none"><li>MQM9790</li></ul>	31.2021.4036
HDR switches	<ul style="list-style-type: none"><li>MQM8790</li></ul>	27.2012.4036
EDR switches	<ul style="list-style-type: none"><li>SB7790</li><li>SB7890</li></ul>	15.2010.4402

### Supported NVIDIA Internally Managed Switches

Type	Model	Latest Tested OS Version
NDR switches	<ul style="list-style-type: none"><li>MQM9700</li></ul>	MLNX-OS 3.12.1002 NVOS 25.01.4000
HDR switches	<ul style="list-style-type: none"><li>MQ8700</li><li>MCS8500</li><li>TQ8100-HS2F</li><li>TQ8200-HS2F</li></ul>	MLNX-OS 3.12.1002
EDR switches	<ul style="list-style-type: none"><li>SB7700</li><li>SB7780</li><li>SB7800</li><li>CS7500</li><li>CS7510</li><li>CS7520</li></ul>	MLNX-OS 3.10.4400

## System Requirements

# Bare Metal Deployment Requirements

Platform	Type and Version
OS (Relevant for Standalone and High-Availability deployments)	64-bit OS: <ul style="list-style-type: none"> <li>• RedHat 8</li> <li>• RedHat 9</li> <li>• CentOS 7</li> <li>• Ubuntu 20.04</li> <li>• Ubuntu 22.04</li> </ul>
CPU <sup>(a)</sup>	x86_64
HCA <sup>s</sup>	<ul style="list-style-type: none"> <li>• NVIDIA ConnectX®-4 with Firmware 12.28.2006 and above</li> <li>• NVIDIA ConnectX®-5 with Firmware 16.35.4030 and above</li> <li>• NVIDIA ConnectX®-6 with Firmware 20.24.4702 and above</li> <li>• NVIDIA ConnectX®-7 with Firmware 28.42.0428 and above</li> <li>• NVIDIA Mezzanine Board with Four ConnectX-7 ASICs for Multi-GPU Connectivity (CEDAR) with Firmware 28.36.0394 and above</li> <li>• NVIDIA BlueField with Firmware 24.33.900 and above</li> <li>• NVIDIA BlueField-2 with Firmware 24.33.900 and above</li> <li>• NVIDIA BlueField-3 with Firmware 32.42.0148 and above</li> </ul>
OFED <sup>(b)</sup>	<ul style="list-style-type: none"> <li>• MLNX_OFED 5.X</li> <li>• MLNX_OFED23.x</li> <li>• MLNX_OFED24.x</li> </ul>

## Note

(a) CPU requirements refer to resources consumed by UFM. You can also dedicate a subset of cores on a multicore server. For example, 4 cores for UFM on a 16-core server.

(b) For supported HCAs in each MLNX\_OFED version, please refer to MLNX\_OFED Release Notes.

<sup>(c)</sup>UFM v6.15.0 is the last version to support NVIDIA ConnectX-4 adapter cards

**(i) Note**

For running SHARP Aggregation Manager within UFM, it is recommended to use MLNX\_OFED-5.4.X version or newer.

**(i) Note**

Installation of UFM on minimal OS distribution is not supported.

**(i) Note**

UFM does not support systems in which NetworkManager service is enabled.

Before installing UFM on RedHat OS, make sure to disable the service.

## Docker Installation Requirements

UFM Docker Container is supported on the standard docker environment (engine).

The following operating systems were tested with Docker Container (as standalone container):

Component	Type and Version
Supported OS	<ul style="list-style-type: none"><li>• RHEL8</li><li>• RHEL9</li><li>• Ubuntu18.04</li><li>• Ubuntu20.04</li><li>• Ubuntu22.04</li></ul>

**(i) Note**

For UFM Docker Container installation in HA mode, please refer to [Bare Metal Deployment Requirements](#) for the list of operating systems and kernels which support HA.

**(i) Note**

On some Ubuntu OSs, Docker is installed via SNAP, which might lead to errors when trying to use UFM Plugins.

To solve this issue, perform the following:

1. Remove Docker installed via SNAP, run:

```
snap remove --purge docker
```

2. Update the local package index, run :

```
apt update
```

3. Install native Docker, run:

```
apt install-y docker.io
```

## UFM Server Resource Requirements per Cluster Size

Fabric Size	CPU Requirements*	Memory Requirements	Disk Space Requirements	
			Minimum	Recommended
Up to 1000 nodes	4-core server	4 GB	20 GB	50 GB
1000-5000 nodes	8-core server	16 GB	40 GB	120 GB
5000-10000 nodes	16-core server	32 GB	80 GB	160 GB
Above 10000 nodes	Contact NVIDIA Support			

## UFM GUI Client Requirements

The platform and GUI requirements are detailed in the following tables:

Platform	Details
Browser	Edge, Internet Explorer, Firefox, Chrome, Opera, Safari
Memory	<ul style="list-style-type: none"><li>• Minimum: 8 GB</li><li>• Recommended: 16 GB</li></ul>

## MFT Package Version

Platform	Details
MFT	Integrated with MFT version mft-4.29.0-127

## UFM SM Version

Platform	Type and Version
SM	UFM package includes SM version 5.20.0

### Note

Assuming the SM is connected to the production cluster, it can handle any events (IB traps) coming from the fabric that is being built; such events should not affect the routing on the production cluster. If events occurred in the production cluster, the routing could be changed.

However, NVIDIA recommends isolating fabric sections to allow faster bring-ups, **faster troubleshooting and misconfiguration avoidance** that can cause routing errors. Isolation provides clearer SM and CollectX logs, avoiding warnings/errors from masking real production issues.

## UFM NVIDIA SHARP Software Version

Platform	Type and Version
NVIDIA® Scalable Hierarchical Aggregation and Reduction Protocol (SHARP)™	UFM package includes NVIDIA SHARP software version 3.8.0



## Used Ports by UFM Server

For a list of ports used by the UFM Server for internal and external communication, refer to [Appendix – Used Ports](#).

## Software Update from Prior Versions

The installer detects versions previously installed on the machine and prompts you to run a clean install of the new version or to upgrade while keeping user data and configuration unchanged.

The upgrade from previous versions maintains the existing database and configuration, allowing a seamless upgrade process.

### Info

Upgrading UFM Enterprise software version is supported up to two previous GA software versions (GA -1 or -2).

For example, if you wish to upgrade to UFM Enterprise v6.17.0, it is possible to do so only from UFM Enterprise v6.16.0 or v6.15.0.

### Note

Due to a possible conflict, SM and SHARP installed by the MLNX\_OFED must be uninstalled. The installation procedure will detect and print all MLNX\_OFED packages that must be removed.

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