

Emulex[®] NVMe over Fibre Channel for Windows

Version 11.4.204.8

Purpose and Contact Information

These release notes describe the interoperability matrices and known issues associated with the Emulex[®] Nonvolatile Memory Express (NVMe) over FC initiator drivers for Windows Server 2016 and Windows Server 2012 on LPe31000-series and LPe32000-series HBAs.

For the latest product documentation, go to <https://www.broadcom.com>. If you have questions or require additional information, contact an authorized Broadcom[®] Technical Support representative at ecd-tech.support@broadcom.com.

NVMe over FC Interoperability Matrices

You can build NVMe over FC end-to-end solutions with initiators from SUSE servers or Windows servers, with a Linux target “just a bunch of flash” (JBOF) based on SUSE. This capability enables you to build low-cost, high-performance NVMe over FC storage proofs of concept for pilot testing of NVMe over FC. The following table provides the required initiator and target pairs across the supported out-of-box Emulex NVMe over FC drivers.

If You Are Using This Initiator Driver	Use This Target Driver
Version 11.4.204.8 for Windows	Version 11.4.234.4 or later for SLES 12 SP3
Version 11.4.234.4 or later for SLES 12 SP3	Version 11.4.234.4 or later for SLES 12 SP3

If you prefer the supported solution from a third-party vendor, SANBlaze Technology provides a storage emulation product that supports initiators and targets. The following table shows the supported versions. Contact SANBlaze at support@sanblaze.com for more information.

If You Are Using This Initiator Driver	Use This SANBlaze Firmware Version
Version 11.4.204.8 for Windows	SANBlaze firmware version 8.0 or later
Version 11.4.234.4 or later for SLES 12 SP3	SANBlaze firmware version 8.0 or later

Known Issues

1. Install firmware version 11.4.204.20 or later to ensure interoperability and to include the latest standards and performance updates.

2. The OneCommand® Manager GUI does not currently support NVMe management, except to modify the NVMe-specific driver parameters described in section 4.1 of the *Emulex NVMe over Fibre Channel User Guide*.
3. The OneCommand Manager CLI does not provide remote support for NVMe commands. The NVMe-specific commands described in section 4.2.2 of the *Emulex NVMe over Fibre Channel User Guide* can only be issued locally from Windows initiators.
4. If the configuration on a Linux NVMe target is changed, the Windows NVMe initiator does not discover the changes.

Workaround

Disable and re-enable each target port at the switch. These actions allow the switch to discover the changes.

5. The OneCommand Manager `nvme-get-feature` CLI command does not retrieve the following features from a SLES 12 SP3 NVMe target or SANBlaze target emulation system:
 - Arbitration (0x1)
 - Power management (0x2)
 - Temperature threshold (0x4)
 - Write atomicity normal (0xA)
 - Asynchronous event configuration (0xB)
 - Host identifier (0x81)
 - Reservation notification mask (0x82)
 - Reservation persistence (0x83)

Workaround

None.

6. OneCommand Manager CLI commands do not support VPort WWPNs for NVMe over FC.

Workaround

None.

7. When using Windows vPorts, use the `nvmetcli` utility on the target or SANBlaze target emulation system to perform the following steps:
 - a. Set `allow_any_host` to 0.
 - b. Under `/hosts`, create the host NQN using this format:
`nqn.2017-01.com.broadcom:ecd:nvmf:fc:<factory WWPN>[:vport WWPN]`
 - c. Under `/subsystems/<nqn_name>/allowed_hosts`, create the host NQN using this format:
`nqn.2017-01.com.broadcom:ecd:nvmf:fc:<factory WWPN>[:vport WWPN]`

NOTE: Do not include colons when specifying the WWPNs.

8. Windows cluster shared volumes are not supported by the Linux target or SANBlaze target emulation systems.

Workaround

None.

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