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Release Notes

Emulex® Drivers for Windows

Release 12.2.207.0

Purpose and Contact Information

These release notes describe the new features, resolved issues, known issues, and technical tips associated with this release of the Emulex® drivers for Windows.

For the latest product documentation, and for supported driver versions, go to www.broadcom.com. If you have questions or require additional information, contact an authorized Broadcom® Technical Support representative at ecd-tech.support@broadcom.com.

New Features

- Adds support for NVMe – Multipath Asynchronous Namespace Access (ANA).
- Adds support for Congestion Management.
- Adds support for deep loopback to HBA link diagnostics tests on Cisco switches
- Adds support for Namespace (Device Name Mapping) information.
- Adds support for trunking (also called FC port aggregation) on LPe35000-series adapters.

Resolved Issues

1. OneCommand® Manager CLI commands support vPort WWPNs for NVMe over FC.
2. Revision B of the Fiber Optic Interconnect Technology (FOIT) AFCT-57F3TMZ-ELX (16GFC longwave optic transceiver) supports D_Port (also called ClearLink®) for MDS Diagnostic for Cisco switches.

Known Issues

1. Revision A of the FOIT AFCT-57F3TMZ-ELX (16GFC longwave optic transceiver) does not support D_Port for MDS Diagnostic for Cisco switches.
2. Neither Revision A nor Revision B of the FOIT AFCT-57F3TMZ-ELX (16GFC longwave optic transceiver) supports D_Port for Brocade® switches.
3. Beginning with software release 11.2, FC HBAs and OneConnect® converged network adapters (CNAs) have independent software kits. Before updating earlier drivers and applications to the software in release 12.2.*x*, refer to the *Emulex Software Kit Migration User Guide* for special instructions and considerations for using the 11.2 and later software kits.

4. Windows driver parameters do not persist after a reboot if they are set with FA-PWWN enabled.

   Workaround

   Perform the following steps:

   a. Disable FA-PWWN.
   b. Reset the port.
   c. Change the driver parameters, using the OneCommand Manager GUI.
   d. Enable FA-PWWN.
   e. Reboot the system.
   f. Reconfigure the driver parameters.
   g. Verify that the correct driver parameters are used.

5. ExpressLane™ LUN priority settings do not persist after a reboot when using FA-PWWN.

   Workaround

   None.

6. I/O might fail if the maximum data transfer size (MDTS) of the target NVMe subsystem is smaller than the maximum transfer size of the Windows driver. By default, the maximum transfer size of the Windows driver is set to 512 KB.

   Workaround

   Change the Windows `LimTransferSize` driver parameter to be smaller than or equal to the MDTS of the target NVMe subsystem. The following values apply to this parameter:

   – `0` = Use the size of the Windows `ExtTransferSize` driver parameter
   – `1` = 64 KB
   – `2` = 128 KB
   – `3` = 256 KB

   The default setting is `0`.

   You must reboot the computer after changing the value.

   Refer to the *Emulex Drivers for Windows for LightPulse® Adapters User Guide* for more information about the Windows driver parameters.

7. The OneCommand Manager GUI does not currently support NVMe management. Use the CLI to modify the NVMe-specific driver parameters described in the *Emulex OneCommand Manager Command Line Interface User Guide*.

8. The OneCommand Manager CLI does not provide remote support for NVMe commands. The NVMe-specific commands described in the *Emulex OneCommand Manager Command Line Interface User Guide* can only be issued locally from Windows initiators.

9. If the configuration on a Linux NVMe target is changed, the Windows NVMe initiator does not discover the changes.

   Workaround

   Disable and reenable each target port at the switch. These actions allow the switch to discover the changes.

10. The OneCommand Manager `nvme-get-feature` CLI command does not retrieve the following features from a SLES 12 SP3 NVMe target:
    - 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.

11. When configuring the NVMe target system, you can determine the NVMe qualified name (NQN) of the initiator ports by using the following formula:
    `nqn.2017-01.com.broadcom:ecd:nvmf:fc:<`*`factory WWPN`*`>[:`*`vport WWPN`*`]`

NOTE: Do not include (`:`) colons when specifying the WWPNs.

12. Windows cluster shared volumes are not supported by the Linux target.

Technical Tips

1. It is a best practice to update the firmware and drivers to the latest supported versions for your server and storage platform.
2. Certain inbox drivers do not support LPe31000-series and LPe32000-series adapters, as described in the following table.

Table 1: Operating System and Support for LPe31000-Series and LPe32000-Series Adapters

Operating System	Support for LPe31000-Series and LPe32000-Series Adapters
Windows Server 2012	No; use the out-of-box driver
Windows Server 2012 R2	No; use the out-of-box driver
Windows Server 2016	Yes
Windows Server 2019	Yes

Workaround

Follow the guidelines in the table.

3. While Emulex drivers for Windows 10 are supported, they are signed by Emulex only. You must accept the Emulex certificate to install the client kits.
4. On LPe12000-series adapters, if you configure the link speed in a BIOS utility, the link speed might be overridden by the Emulex driver for Windows according to its link speed setting.

    Workaround

    Configure the link speed in both the Emulex driver for Windows and the x86 BootBIOS or UEFI utility.

5. D_Port and FA-PWWN cannot be enabled simultaneously.

   Workaround

   If D_Port is enabled and you want to enable FA-PWWN, you must first disable D_Port. If FA-PWWN is enabled and you want to enable D_Port, you must first disable FA-PWWN.

6. Neither FA-PWWN nor Dynamic D_Port can coexist with the trunking feature on LPe35000-series adapters. If trunking is enabled, the firmware automatically disables FA-PWWN and Dynamic D_Port.

7. If D_Port is enabled on an adapter, it is not supported in a direct-connect point-to-point environment. The adapter must be connected to a switch.

8. The Windows information that was provided in the *Emulex NVMe over Fibre Channel User Guide* has been moved to the *Emulex Drivers for Windows User Guide*. Refer to the *Emulex Drivers for Windows User Guide* version 12.2 for the latest information regarding NVMe and the Emulex drivers for Windows.

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