



TargetConnect™

Linux Software Developer Kit for Target Mode Applications

ACCELERATE,
SIMPLIFY
AND ENHANCE
TARGET
DRIVER
DEVELOPMENT

Overview

Storage solution developers experience intense deadline and budget pressure to design and deliver advanced features and functionality required by networked storage applications. The Emulex TargetConnect™ Software Developer Kit (SDK) provides the flexibility to quickly develop and deploy feature-rich storage solutions based on Emulex LightPulse® Fibre Channel and FCoE SCSI target mode drivers. These solutions include sophisticated storage devices which provide advanced functionality for storage appliances, test and diagnostics, backup engine devices, deduplication, and more.

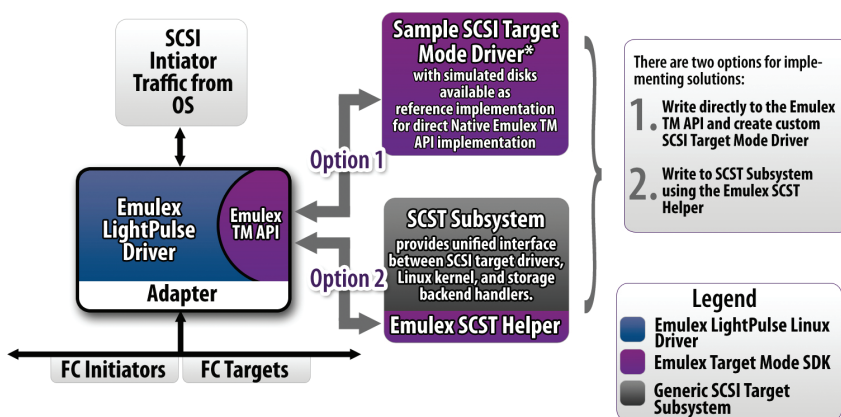
Key Benefits

- Provides flexibility to develop and deploy storage solutions based on Emulex Fibre Channel and FCoE CNA target mode drivers
- Decreases time-to-market for hardware and software storage solution developers
- Enhances portability and provides driver compatibility across all generations of Emulex adaptors
- Helps developers simplify their target driver development by leveraging Linux and low-cost Intel hardware
- Provides a world-class support infrastructure from Emulex to assist your company during the development phase

Key Features

- Linux source code driver for implementing embedded Linux storage solutions
- Sample SCSI target mode driver for custom implementation
- Both initiator and target mode processes are enabled
- Interface to Open Source SCST Subsystem
- Compatible with Emulex SLI3 (Service Level Interface) technology enabling single-driver support for Emulex LightPulse 4 and 8Gb/s HBAs, and 10Gb/s CNAs in addition to FCoE-based connectivity
- High performance features such as Host Buffer Queue (HBQ) to allow the target driver to customize the application's buffer handling and Interrupt Coalescing to improve CPU-offload
- NPIV support, allowing virtual ports to be created with individual SCST target instances bound to them
- FCP-3 Tape Target Error Recovery Protocol support for tape and virtual tape applications

Emulex TargetConnect™ Linux Software Developer Kit



* Developer may optionally replace/modify the sample driver (which is a reference) with custom driver code.

TargetConnect™

Linux SDK for Target Mode Applications

SPECIFICATIONS

Two Development Strategies

The TargetConnect SDK supports two development strategies:

The Sample SCSI Target Mode Driver for Proprietary Functionality

This package includes an Emulex Lightpulse driver (Linux initiator base driver) delivered in source code form with an Emulex target mode API added to the base driver. Developers write directly to the Emulex target mode API and create a custom SCSI target mode driver in any environment, whether it be a custom OS or off-the-shelf OS. To guide the development of a custom driver, a sample SCSI target mode driver with simulated disks is provided. The complete kit is available with an Emulex software license agreement.

The Linux target mode API driver provides more control to develop an infrastructure for a target mode application, with greater design customization to achieve better performance and proprietary functionality.

The Emulex SCST Subsystem for Open Source Functionality

For developers who want to leverage the Open Source community SCST architecture in designing Linux-based storage solutions, Emulex provides an Emulex SCST helper, which transparently maps the code to the Open Source SCST Subsystem.

SCST is an Open Source standard developed by the Linux community, and is an alternative implementation of a SCSI target subsystem for Linux. It provides a unified, consistent interface between SCSI target drivers and the Linux kernel as well as between the Linux kernel and storage backend handlers.

Developing Storage Solutions around Emulex SAN Connectivity Products

Companies are choosing to license the TargetConnect Software Developer Kit to build solutions around Emulex LightPulse Fibre Channel HBAs and FCoE CNAs. Emulex's product line is based on eight generations of advanced, field-proven HBA technology for enterprise-class SANs.

The TargetConnect Software Developer Kit License Agreement Includes:

- Linux source code to an Emulex Standard Linux target mode driver
- Two Emulex LPe12002 dual-channel 8Gb/s Fibre Channel HBAs
- Documentation for the target mode API
- Two days of engineering training at Emulex headquarters in Costa Mesa, CA
- One year of Emulex dedicated technical support.

Linux Operating System Support

- The Emulex Sample SCSI Target Mode Driver is supported and tested with RHEL 5.x and SLES 10.x
- The Emulex SCST Subsystem is supported and tested with Linux 2.6.18 and SCST version 1.0.1

Performance

- Performance will vary by implementation, but typical performance is between 70% and 90% of the performance achieved in standard initiator mode.

Portability and Compatibility

- The TargetConnect SDK enhances portability and provides driver compatibility across all generations of Emulex adaptors. It provides a broad enterprise-class product line of 4Gb/s, 8Gb/s HBAs and 10Gb/s FCoE CNAs that are available in multiple form factors and supported across almost every model of rack-mount and blade servers.

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