



Mellanox NPS-400 EZdk

Release Notes

Ver 2.1a Open

www.mellanox.com

NOTE:

THIS HARDWARE, SOFTWARE OR TEST SUITE PRODUCT (“PRODUCT(S)”) AND ITS RELATED DOCUMENTATION ARE PROVIDED BY MELLANOX TECHNOLOGIES “AS-IS” WITH ALL FAULTS OF ANY KIND AND SOLELY FOR THE PURPOSE OF AIDING THE CUSTOMER IN TESTING APPLICATIONS THAT USE THE PRODUCTS IN DESIGNATED SOLUTIONS. THE CUSTOMER’S MANUFACTURING TEST ENVIRONMENT HAS NOT MET THE STANDARDS SET BY MELLANOX TECHNOLOGIES TO FULLY QUALIFY THE PRODUCT(S) AND/OR THE SYSTEM USING IT. THEREFORE, MELLANOX TECHNOLOGIES CANNOT AND DOES NOT GUARANTEE OR WARRANT THAT THE PRODUCTS WILL OPERATE WITH THE HIGHEST QUALITY. ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT ARE DISCLAIMED. IN NO EVENT SHALL MELLANOX BE LIABLE TO CUSTOMER OR ANY THIRD PARTIES FOR ANY DIRECT, INDIRECT, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES OF ANY KIND (INCLUDING, BUT NOT LIMITED TO, PAYMENT FOR PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY FROM THE USE OF THE PRODUCT(S) AND RELATED DOCUMENTATION EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.



Mellanox Technologies
350 Oakmead Parkway Suite 100
Sunnyvale, CA 94085
U.S.A.
www.mellanox.com
Tel: (408) 970-3400
Fax: (408) 970-3403

© Copyright 2016. Mellanox Technologies Ltd. All Rights Reserved.

Mellanox®, Mellanox logo, Accelio®, BridgeX®, CloudX logo, CompustorX®, Connect-IB®, ConnectX®, CoolBox®, CORE-Direct®, EZchip®, EZchip logo, EZappliance®, EZdesign®, EZdriver®, EZsystem®, GPUDirect®, InfiniHost®, InfiniScale®, Kotura®, Kotura logo, Mellanox Federal Systems®, Mellanox Open Ethernet®, Mellanox ScalableHPC®, Mellanox TuneX®, Mellanox Connect Accelerate Outperform logo, Mellanox Virtual Modular Switch®, MetroDX®, MetroX®, MLNX-OS®, NP-1c®, NP-2®, NP-3®, Open Ethernet logo, PhyX®, PSIPHY®, SwitchX®, Titera®, Titera logo, TestX®, TuneX®, The Generation of Open Ethernet logo, UFM®, Virtual Protocol Interconnect®, Voltaire® and Voltaire logo are registered trademarks of Mellanox Technologies, Ltd.

All other trademarks are property of their respective owners.

For the most updated list of Mellanox trademarks, visit <http://www.mellanox.com/page/trademarks>

Table of Contents

1	Introduction	4
2	This Release	4
3	System Requirements	4
4	Documentation	4
5	Known Limitations	5

1 Introduction

The EZdk software development kit is a comprehensive set of design and runtime tools developing both data-plane and control-plane applications for NPS-400 devices.

This release provides post-silicon support for the NPS-400 network processor. It fully supports real chip bring-up and application development.

This document provides additional information related to the release not contained in the product's manuals. It is recommended that you read this document before using the product.

2 This Release

This release of the EZdk software development kit for NPS-400 devices is aimed at allowing customers to develop NPS data-plane and control plane applications. This release includes the following main components:

- EZldk – Linux® development kit enabling customers to develop and build the Linux kernel, file system and GNU tool-chain for the NPS device.
- EZdp – Data-plane service library providing the APIs used to develop data-plane applications on the NPS device.
- EZcp – Control-plane service library providing the APIs used to develop control-plane applications for the NPS device.
- Sample applications demonstrating how to develop applications for the NPS-400 devices using EZdk.

This release represents work in progress, and is subject to change in future releases.

3 System Requirements

EZdk-nps is compliant with RedHat6.x distribution or any derivative such as CentOS6.x.

Any other environment, such other versions of the distribution or different distributions are not guaranteed to work.



Note: The GCC toolchain is provided with EZdk as precompiled binaries. Since it is dynamically linked to standard libraries of distribution and built upon RedHat6.x using the toolchain, it may not work on other environments due to missing libraries.

4 Documentation

The following documentation can be found in the doc folder of the EZdk installation:

General

- *EZdk Release Notes* (this document) – provides additional information related to the release that is not contained in the product's manuals.
- *EZdk Installation Guide* – provides information on EZdk installation procedure and contents.

Data Plane Environment and Control Plane Environment

- *NPS-400 Developer's Guide* – describes each of the control plane libraries and each of the data plane libraries and their respective APIs. Describes the various EZdk Control Plane

Library (EZcp) components and how they can be ported to various platforms and used to develop control-plane applications for NPS-based products.

Sample Applications

- *NPS-400 Demo Application* – sample data plane and control plane application designed to enable developers to quickly begin writing an application for an NPS-400 system.

5 Known Limitations

Table 1: Known Limitations

Index	Issue
NPS-400 Real Chip	
1.	The following items are not supported/operational on the NPS-400 real chip in this release: <ol style="list-style-type: none"> 1.1. Ethernet: 10/40GBASE-KR, Synchronous Ethernet. 1.2. GCI devices. 1.3. Operation of the NPS management LAN at 100 Mbps is not supported (only operational at 1 Gbps). 1.4. IPsec application is not fully optimized.
DPE	
2.	ezdp_load_data_from_sum_addr(_async) and ezdp_store_data_to_sum_addr(_async) APIs: 256-byte values in cannot be immediate in these APIs and the user should use non-immediate values.
3.	EZframe library – ezframe_send_to_if and ezframe_send_to_tm APIs: <ul style="list-style-type: none"> • These APIs fail to update the header offset to be optimized. • EZFRAME_DONT_OPTIMIZE_HEADER_OFFSET is not functional.



Important Note: The verification of the NPS 400 device is still in progress and various issues and/or instabilities may still exist.