Release Notes: NetApp_Katana_v1.0.0-E

Date: Sept 16, 2019

Introduction

The Pensando "v1.0.0-E" software distribution for NetApp is a patch release, targeted for FreeBSD 11.1+ and Debian 4.9.0 based systems.

Please read and follow all the instructions for any previous Release Notes, if applicable.

Documentation

The documentation directory (./PNSO/docs) contains the following:

Title	Description
Pensando_Quickstart_Guide.pdf	Pensando Quickstart Guide
NetApp_Katana_Pensando_User_Guide_version_0.10.0.pdf	Product Overview, Installation, CLI Mgmt, Product Specs
NAPLES_SONIC_API_User_Guide_version_0.2.0_FINAL.pdf	Detailed API guide for using the SONIC kernel offload driver
SONIC_REF_GUIDE_v0.2.0.pdf	doxygen generated reference guide for the SONIC offload driver
Pencake_Sonic_Scalability_limits.pdf	Tunables and examples for the Pencake/SONIC driver

ontap_write_path_offload.txt	NetApp authored SONIC offload driver examples
FreeBSD_Katana_ionic_manual_0.4.0.pdf	IONIC Build and Installation Guide

Firmware Update Sequence

When updating Naples firmware to a newer version, *always* use the current version of `penctl` and the device drivers to update to a newer version of firmware.

Naples requires a host reboot after updating firmware.

Once rebooted, then build the newer device drivers and install the newer version of `penctl`.

Driver Build and Installation

Please refer to the Drivers/Users Guide for instructions on how to build the appropriate device drivers (IONIC, SONIC and/or RDMA).

For NetApp, the source files for the Pensando drivers and **penctl** are tracked in GitHub at https://github.com/pensando/external-netapp
Please email **jainvipin@pensando.io** and/or **ng-pensando-netapp-eng@netapp.com** for repo access.

Software and Firmware Installation

Please follow the **NetApp Katana Pensando User Guide**

Known Software Defects, Bugs, Caveats, and Limitations

The RDMA driver supports a new module parameter named
`compat.linuxkpi.ionic_rdma_spec`. The default value of this parameter is 8, and valid values are 8 and 16 only. With the default spec value of 8, rdma applications get best performance for up to 8 sg list entries. If there will be rdma applications posting more than 8 sg list entries per work request, and only if the length per sg entry is less than 64K bytes, then the parameter should be set to 16 for best performance.

PS-1312 0.7.0 ionic/sonic drivers are not compatible with 0.8.0 naples firmware
Description:
The RSS type field of rx completion for packet type in 0.8. NetApp DEBUG build calculates RSS type in s/w, so 0.7 ONTAP driver is using 0.8 Naples pkt_type as rss_type. Asserts in the ONTAP debug version will fail with the software calculated RSS type.
Failure conditions:
Users who upgrade to a newer 0.8 FW with an older 0.7 driver in a ONTAP debug version will panic on driver load of subsequent reboot.
Workaround:

Known Bugs and Caveats

BURT 1266191 IONIC: Katana-Tencel: Cluster goes out of Quorum with continuous unicast traffic on 100G CS from Spirent

BURT 1266058 Naples port takes over 60s to go down after taking the port down

BURT 1265763 26-35% lower peak throughput on Katana Hi fcp/nfs remote aggread with Pensando operate both storage offload engine and NIC

Fixed Bugs

Contact Us

For questions/issues/problems, please report to :
`ng-pensando-netapp-eng@netapp.com`